THE

AMERICAN GAS-LIGHT JOURNAL

DEVOTED TO.

LIGHT, HEAT, WATER-SUPPLY, AND SEWERAGE.

Iron Buildings, Nos. 254 & 256 Canal Street, East, near Broadway, New York.

VOL. II.—No. 14. NEW-YORK, MONDAY, JULY 16, 1860. $3 PER ANNUM.

TO GAS-FITTERS & PLUMBERS.—L. Waefeler & Co., No. 94 Beekman street, New York, have always on hand several hundred kegs WROUGHT-IRON GAS-PIPE HOOKS, of all sizes from ¼ to 2 inches. They are made of best quality horse shoe nail iron, and warranted not to break. Also, PLUMBERS' MATERIALS, such as China Wash-Basins, Closet-Basins, Pan-Closets, Bath Tubs, Boilers, Brass and Silve-plated Cocks, Brass and Iron Pumps, Hydraulic Rams, French Fountain Jets, &c., all at the very lowest prices.

BUTTS & KENDALL, (Formerly F. Butts & Co.,) Dealers in STERLING COAL, Cleveland, Ohio.—The attention of Gas Companies is called to the following letters as to the merits of the above Coal, being a few of the many we have received, and from which we are led to believe that there is no English or American Coal which combines all the qualities desired in a Gas Coal as perfectly as the Sterling :—

Office of the Manhattan Gas Light Co., New York, January 13, 1860.

MESSRS. BUTTS & KENDALL :—*Gentlemen* :—Yours of 9th inst. is received. The "Sterling Coal" received from you during the past year worked very satisfactorily—averaging 9520 cubic feet of 15 candle Gas per ton of 2240 lbs, and 41 bushels of Coke, weighing 1465 lbs. We consider it among the best of American Gas Coals, for the quantity and quality of the Gas produced, and also for the excellent quality of its Coke. I am, Gentlemen, your obedient servant, CHARLES ROOME, Pres.

Office of the Rondout and Kingston Gas Light Co., Rondout, *Jan* 4, 1860.

MESSRS. BUTTS & KENDALL :—*Gentlemen* :—The 600 tons of Sterling Coal ordered from you in August, 1859, has now been in use over four months, to my entire satisfaction. Its average yield is 4, 40-100 feet, and a good strong light. The Coke produced equal in quality and quantity, to best English Coking Coals. It burns very freely with little clinker. In purification it is economical, using no more lime than New Pelten. It is superior to any American Coal I ever used. I shall be pleased to give you any further [illegible] at my office in New York.

WM. W. HAGUE, 322 Broadway.

The Cleveland Gas Light and Coke Co., *Office*, 195 *Superior-St., Cleveland, Dec.* 30, 1859.

MESSRS. BUTTS & KENDALL :—*Gentlemen* :—This Company has used between 3000 and 4000 tons of your "Sterling Coal," and are still using it with very satisfactory results. We find the average product of a ton of 2000 lbs. is about 8800 feet of Gas and about 37 bushels of Coke. The Gas is of good illuminating power and quite free from sulphur or other impurities, one bushel of lime purifying 9000 feet, and the Coke of very superior quality. The yield of Gas is about the same as from the Pittsburgh Coal, and the Coke better adapted to our use. Yours, truly. T DWIGHT ELLS, Sec.

Office of the Sandusky, O., Gas Co., *Jan.* 16, 1860

MESSRS. BUTTS & KENDALL:—*Gentlemen* :—This Company has used your Sterling Coal since (July 3d, 1859, and are still continuing the use of it with satisfaction to the Company and consumers. The average product has been 8,620 feet of Gas per ton of 2,000 lbs, and 37 bushels of Coke of very superior quality. The Gas is as good as that obtained from Pittsburgh Coal I consider it the best Coal ever used in our works. I am, gentlemen, yours respectfully, WM HUDSON, Sup't & Sec'y.

We would also refer to Gas Companies in the following places :—New York City (Manhattan and New York Co's), Albany, Troy, West Troy, Rochester, Oswego, Rondout, Kingston, Albion, Brockport, Seneca Falls, Elmira and Lyons, in the State of New York ; Cleveland, Toledo, Sandusky, Norwalk and Oberlin, in Ohio ; Detroit, Ann Arbor, Grand Rapids and Kalamazoo, in Michigan ; Coburg, in Canada, and two Companies in Milwaukie, Wisconsin.

The extensive Mines of the Sterling Coal and Mining Company, in the western part of Pennsylvania (known as the Sterling Hills, and the highest in that part of the State), are wholly under our control, and the Coal is mined and sold only by us or our Agents. The average product of the Sterling Coal, per ton of 2,000 lbs., is 8,733 feet of 15½ candle Gas (4, 37-100 per lb.), and 37 bushels of Coke of very superior quality. Getting our Coal to this place by railroad, a supply can be had during the summer months (as well as at all other times), which is not the case with coals dependent upon high water for transportation, as are most or all other gas coals which are sent to the Lake ports for shipment. Our mining facilities are such, that we are prepared to ship extensively. For any further information address the undersigned, or M. BALLARD, Esq., Syracuse, N. Y., who is our Agent for that State.

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Owning our mines and a fleet of vessels on the Lakes, having no Railroad transportation, and only 70 miles of canal from this city, or 140 miles of canal and Lake from Buffalo to the coal fields, being 175 miles less of transportation for Coal to the Seaboard, than any Coal Depot on the Lakes, and having an Agency in Buffalo for the transhipment of our Coals only, it is unnecessary to say that parties purchasing of us, will get their Coal at first hand, saving, thereby, commission to managers and 175 miles of extra railroad and lake transportation.

A working average of our Beaver Coal is 9,500 feet of 16 Candle Gas, and 40 bushels Coal to the ton of 2,240 lbs.

The Manhattan Gas-Light Co of New York having thoroughly tested the Gas Coals of Pennsylvania and Ohio, the following extract from a letter to us will speak for itself:

"MANHATTAN GAS-LIGHT COMPANY, "New York, June 15th, 1859.

"Messrs. JOHN HEARN & Co., Erie, Penn. :

"GENTLEMEN,—This Company has a contract with your firm for the delivery of five thousand tons of Gas Coal, half each Beaver and Mount Carbon, at $ —— per ton of 2,240 lbs.

"The cargo which has been received is satisfactory, and as we shall need 15 or 20 thousand tons more, to be delivered through the present summer, we beg you to advise us whether you desire to increase your contract. We have applications from various parties who desire to supply the Company, but shall be satisfied to get a larger quantity of your Coals, provided you can serve us on terms equally favorable with others.

"For the Gas Co.

"HENRY YOUNG."

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ANTHRACITE AND BITUMINOUS Coal.—We are now prepared to contract with Dealers and Manufacturers, at wholesale only, for the choicest varities of Lehigh and Schuylkill Coals, Pure Locust Mountain direct from the miners' hands, George's Creek Coal from Hampshire Mines at Baltimore, and Midland Co.'s Mines at Alexandria, unexcelled for Blacksmiths', Locomotive and Manufacturing purposes. At Elizabethport, N. J., we always have a full supply of Lehigh, Spring Mountain, Harleton and Council Ridge Coals.

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J. K. BRICK, Esq., Eng'r Brooklyn Gas Co., "
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F. T. WILLIS, Esq., Pres. Savannah Gas Co.
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REFERENCES:—Gas-Light Works, Buffalo, N. Y.
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See Engravings in AMERICAN GAS-LIGHT JOURNAL for July 1, 1860, page 280.

KENNEDY'S Method of Securing Iron Mouth Pieces to Clay Retorts.—The Retort is made in the usual form, but without any bolt-holes through the flange. An iron collar made in two pieces, is then placed around the Retort behind the flange, and bolted to the mouth-piece by bolts which pass just outside of the flange instead of passing through it. As each Retort costs about $30, and as the breaking out of the bolt-holes entirely ruins the whole Retort, the importance of this simple but valuable improvement will be readily appreciated.
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Samples of the above castings can be seen at the Rooms of the AMERICAN GAS-LIGHT JOURNAL.

S. V. MERRICK, J. VAUGHAN MERRICK,
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SOUTHWARK FOUNDRY, Philadelphia.
MERRICK & SONS, Engineers, manufacturers of every description of Gas Machinery.
Retorts, Bench Castings, Condensers, Washers, Scrubbers, Wet or Dry Lime Purifiers, Coke Wagons, Fire Tools, Wrought Iron Grate Bars, Gasholders, either TELESCOPIC OR SINGLE, WITH SUSPENSION FRAMES COMPLETE; Wrought Iron Roof Frames, for Iron or Slate; Stop Cocks, Exhausters, Steam Pumps, Boilers and Tanks, Steam or Hand Air Pumps for proving Street Mains, Centre Seals, Governors, Wrought or Cast-Iron Lime Sieves for Purifiers, Purifier Hoisting Machines, &c., &c.
Address— MERRICK & SONS,
5th and Washington Streets, Philadelphia.

HUNTER, KELLER & CO., Manufacturers of
WROUGHT-IRON PIPES, AND FIXTURES
of all descriptions, for
STEAM, WATER AND GAS,
144 Centre street, New York.

TRANER & MERCER, 117 North Water street, and 124 North wharves, Philadelphia, AGENTS FOR FLORENCE & MERCER FOUNDRIES, ELK STREE IRON WORKS.
CAST IRON STREET MAINS; *Bends, Branches, Chemical Retorts, and all kinds of Castings for* GAS-WORKS, either COAL or ROSIN WORKS. STREET IRON FOR GASOMETERS *cut and punched to order.* BOILER IRON *of all descriptions.* RUSSIA SHEET IRON, TIN PLATES, BLOCK TIN, COPPER, PIG LEAD, SPELTER, and Metals generally.

GEORGE W. KRAFT, GASOMEter and Boiler-maker, Chestnut st. wharf, West Philadelphia, manufactures Gasometers, Retort House Roofs, Water Tanks Purifying Boxes, Coal Cars, Coke Barrows, and all kinds of Wrought Iron Work for Bridges, Buildings, &c.
Particular attention paid to Alterations and Repairs.
REFERENCES:
John C. Cresson, Engineer Gas Works, Philadelphia; Joseph A. Sabbaton, Engineer Manhattan Gas Works, New York; Col. W. S. Campbell, Engineer Gas Works New Orleans; P. A. Sabbaton, Engineer Gas Works, Albany; Waterhouse and Bowes, Gas Engineers, Raleigh, N. C.; Joseph Patton, Newark, N. J.; C. B. Dungan, Philadelphia.

GIRARD TUBE WORKS. MURPHY & ALLISON, Proprietors. Wrought Iron Coke-Welded Tubes, for Gas, Water, Steam, &c. Wrought, Cast and Malleable Iron Fittings, Steam and Gas Cocks, Valves. Also, Galvanized Tubes and Fittings.
Office 1908 Market street, Philadelphia.

MORRIS, TASKER & CO., PASCAL IRON WORKS,
[ESTABLISHED 1821]
PHILADELPHIA, manufacture Wrought Iron Welded Tubes for Gas, Steam or Water; Lap Welded Boiler Flues,
GALVANIZED WROUGHT IRON TUBES,
ARTESIAN WELL PIPES,
Of Wrought or Cast Iron, screwed together, flush inside and out; Gas-works Castings, Retorts and Bench Castings for Coal gas works; Cast Iron Street Mains, Bends, Branches, Drips, &c.
GAS AND STEAM FITTERS' TOOLS, &c.
STEPHEN MORRIS, CHAS. WHEELER,
THOMAS S. TASKER, STEPHEN P. M. TASKER.

CAST IRON WATER, GAS, DRAIN, AND HEATER PIPES, &c.,
COLUMBIAN IRON WORKS,
OFFICE, No. 46 NORTH SEVENTH STREET,
Below Arch street, Philadelphia.
THOS. M. ADAMS, Proprietor.

J. B. BROWN & CO., Iron Founders, adjoining Railroad Depot, Peekskill, N. Y. Manufacturers of the U. S. Lamp-post Mail Boxes. Castings of every description, hard and soft, delivered in New York city. J. B. B. and Co. manufacture all the celebrated Peekskill plows, also a new line of excellent iron-beam Plows. Gin-gearing, Road-scrapers, Agricultural machinery.
Attention paid to getting up patterns.

COLWELL & CO., Manufacturers of Pig Iron and Cast Iron Gas and Water Pipes, No. 207 North Water street and 206 North Wharves, Philadelphia.
STEPHEN COLWELL, W. DWIGHT BELL,
THEO. TREWENDT, SAMUEL FULTON.

TO GAS AND WATER COMPAnies:
The undersigned, Agent for Messrs. Thomas Edington & Sons, Phenix Foundry, Glasgow, Scotland, is prepared to contract for all descriptions of Cast-iron Pipes of their manufacture.
About 6000 tons of these Pipes have lately been supplied to the Brooklyn Water-works, N. Y., and the Chief Engineer of the Works, A. P. Kirkwood, Esq., is ready to testify to their excellent quality.
ARCHIBALD BAXTER,
90 Broad st., New York,
Sole Agent For the United States and Canada

HENRY G. NICHOLS, 24 Pine Street, up stairs, Room No. 5, New York. Manufacturers' Agent for the Sale of Cast Iron Pipe, Bends and Branches for Gas or Water, Retorts, Lamp-Posts, Lanterns for Gas Lamp-Posts.

NORRIS & GREGG,
DEALERS IN WROUGHT IRON Pipe, and Manufacturers of Fittings for Steam, Gas, and Water, Nos. 62 and 64 Gold street, (between Beekman and Fulton streets,) New York.
THOMAS H. NORRIS. CHARLES GREGG.

PIPE, PIPE, PIPE, PIPE, PIPE. —Plumbers, and all others who use Cast Iron Drain Pipe, will do well to call at the Pipe Foundry, 39 Greene street. A large lot of Five and Six Inch, Seven Foot length, on hand, and for sale low. A. & E. B. BRADY.

WATERHOUSE & BOWES, Builders of Gas-Works, Raleigh, N. C.—Gas-Works erected in any part of the United States.
REFERENCES.

J. H. Carson,	Pres't,	Charlotte,	N. C.	Gas-W'ks.
D. G. Fowle,	do.	Raleigh	do.	do.
J. C Smythe,	do.	Salisbury	do.	do
Arch. McClean,	do.	Fayetteville	do.	do.
Jos. A. Waddell,	do.	Staunton	Va.	do.
A. G. Story,	do.	Little Falls	N. Y.	do.
G. H. Young,	Prop'r	Waverley	Miss.	do.

Wm. Johnston, President of Charlotte & S. C. R. R., Charlotte, N. C., A. B. Wood, Agent Reading Iron Works, 57 Maiden lane, N. Y., Cornelius & Baker Manufacturers of Gas-fixtures, Philadelphia.
G. B. WATERHOUSE. M. BOWES.

$4,500 Reward. To Inventors. —The undersigned, on behalf of a Committee appointed by the merchants and others of New Bedford, Mass., hereby offer the following premiums for the best Stand and Portable Hand-Lamps, designed to be used for the Burning of Manufactured Whale Oil:

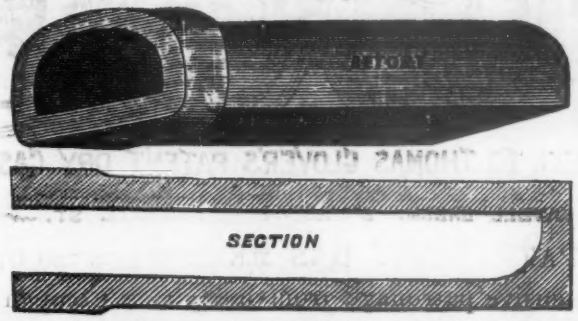
For the best Stand Lamp	$3,000
For the second-best Stand Lamp	300
For the best Portable or Hand Lamp	1,000
For the second best Portable or Hand Lamp	200

All Lamps offered for the Premiums must be submitted to the Committee at New Bedford, on or before the 30th day of August, 1860. The Committee reserve the right to test all lamps submitted to them, and to reject all if, in their judgment, no one is deemed worthy of their acceptance. They also will require the inventor to secure Letters Patent for the inventions which may be approved by them, if they deem it expedient, and to place the same, by proper assignment, under the control of the Committee, upon such terms as may be agreed upon between them.
JOS. GRINNELL, Chairman.
MATTHEW HOLLAND, Sec'y.

GAS-LIGHT STOCKS FOR SALE. THREE HUNDRED THOUSAND DOLLARS of Stocks in various Gas-light Companies in the United States, paying from 6 to 12 per cent. dividend, for sale by JOHN B. MURRAY, Rooms of the AMERICAN GAS-LIGHT JOURNAL, N. Y.

KING BROTHERS,

STOURBRIDGE, ENGLAND, FIRE-BRICK AND RETORT WORKS.



KING BROTHERS beg especially to call the attention of Gas Companies to the superiority of their Retorts, which are made from the celebrated STOURBRIDGE FIRE-CLAY. Mr. King has patented a Kiln for Burning Retorts, by which Patent all Cold Air is excluded from the Kiln while burning, thus rendering them

FREE FROM CRACKS AND CORRECT IN FORM.

By great care in Manufacturing, combined with the advantages in burning, a VERY SMOOTH SURFACE is obtained, rendering them less liable to carbonize

RETORT OVENS, FIRE-BRICKS, GUARDS, SADDLES, RABBITTED BURS, FLUES, AND QUARRIES, ARE ALL MANUFACTURED OF THE SAME QUALITY OF CLAY.

EVERY RETORT AND BRICK IS BRANDED "KING BROTHERS, STOURBRIDGE."

GEORGE WRIGHT & CO.'S

LIVERPOOL AND NEWCASTLE CANNEL AND COAL

FOR GAS MANUFACTURE AND HOUSE USE.

THE undersigned does not submit for comparison the result of chemical analysis, as this plan is too often adopted to promote the sale of inferior or worthless coals that in practice bear no particle of resemblance to their theoretical, and sometimes distorted descriptions.

He is authorized, however, to guarantee the *careful shipment of the best qualities of Cannel and Coal, at the lowest rates of Invoice and Freight offered at time of engagement;* and any losses sustained by short weight, or the neglect of the conditions mentioned, will be promptly and cheerfully repaired.

OFFICE OF THE MANHATTAN GAS-LIGHT COMPANY,
New-York, October 8th, 1859.

MESSRS. GEORGE WRIGHT & Co., Liverpool:

Gentlemen,—For many years you have acted as agents for this company, purchasing for, and forwarding to them, coals, retorts, and other gas apparatus.

Your experience, ability and sterling integrity, entitle you to and have secured our confidence, and we cheerfully recommend your house to all gas companies desiring the services of an agent in England. My own personal knowledge of the superior quality of the coals within your control, and my acquaintance with the manufacturers of such articles as can be advantageously procured by you in England for gas companies abroad, added to my high regard for you personally, induce me to write this letter, and express the hope that you may be able to extend your business in this country, not only for your own advantage, but also for the benefit of those who may confide in you as securely as we have done.

I am, gentlemen, your very obedient servant,

CHARLES ROOME, *President.*

T. W. PARMELE, Agent,
No. 4 Irving Place, New-York,

GAS-EXHAUSTERS,

GOVERNORS, FURNACE DOORS,
RETORT-COVERS, CASTINGS,
IMPLEMENTS,
PHOTOMETRICAL AND METER-PROVING APPARATUS.

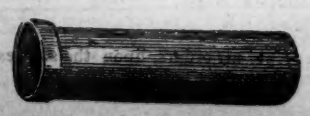
HARRIS & PEARSON,

PROPRIETORS OF

BEST GLASS-HOUSE POT, AND CRUCIBLE CLAY.

Manufacturers of Fire-Bricks, Gas-Retorts, and Glass-House Furnace-Bricks of every description.

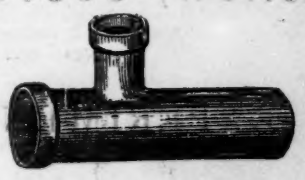
'AMBLECOTE FIRE-CLAY AND BRICK WORKS, STOURBRIDGE, ENGLAND.



GAS, STEAM, SMOKE, PURE WATER AND SOIL PIPE,

CLAY RETORTS, TILES, BRICKS,

AND EVERY VARIETY OF FIRE GOODS.



JOSEPH CLIFF,

WORTLEY FIRE-BRICK WORKS,

Near Leeds, England.

T. W. PARMELE, Agent, No. 4 Irving Place, New York.

MEDALS AWARDED TO THOMAS GLOVER'S PATENT DRY GAS-METERS.

MANUFACTORIES

SUFFOLK ST. CLERKENWELL GREEN. & ALLEN ST. GOSWELL ST. LONDON.

THOMAS GLOVER introduced his PATENT DRY GAS METERS into the United States and Canadas in 1846, and since that time he has received extensive patronage from many Gas Companies of those countries as well as from this. Thomas Glover confines his sole attention to the business of Gas-Meter making. The propriety of his doing so is satisfactorily proved by his success. For example: one London Company has now in use above 12,500 of his Patent Dry Gas-Meters, and some of these Meters have been fixed for fourteen years and are still in working order, without complaint from either the company or the consumer.

THOMAS GLOVER thinks it necessary to put Gas Companies on their guard against parties selling Patent Dry Gas-Meters constructed in imitation of his, but unskilfully made on erroneous principles, and with improper and unsuitable materials.

THOMAS GLOVER'S Workshops are now the most extensive in this or any other country, and he is thereby enabled promptly to execute orders to any extent required. Purchasers may, at any time, inspect his Works and the materials of which his Meters are constructed.

Suffolk Street, Clerkenwell, London, and 1 Barrett Street, Fulton Street, Boston.

SAMUEL DOWN,

Nos. 340, 342, 344 and 346 West Twenty-second Street, North River, NEW YORK CITY,

MANUFACTURER OF

WET AND DRY PATENT GAS METERS,

Pressure-Registers, Pressure-Indicators and Gauges, Station, Show, Customer, and Experimental Gas-Meters, Centre or Hydraulic Valves, Governors, Compensators for Exhausters, and the Standard Testing Gas-Holders* for Proving Meters, now used in the State of New York in compliance with an Act of the Legislature. Also, Bunsen's Photometer, with complete Apparatus for working the same.

*The standard of measurement of this Gas-Holder is given by Professors TORREY, of the U. S. Assay Office; JOY, of Columbia College; GIBBS, of the Free Academy and several other distinguished scientific gentlemen.

JOSEPH LENNIG & CO.,

Nos. 313 and 315 NEW MARKET STREET, above Vine Street,

PHILADELPHIA, PENN.,

MANUFACTURERS OF

WET AND DRY

PATENT

GAS-METERS,

STATION,

SHOW, CUSTOMER,

AND

EXPERIMENTAL

METERS,

PHOTOMETERS,

PRESSURE REGISTERS,

INDICATORS,

AND

GUAGES,

GOVERNORS, METER PROVERS,

CENTRE SEALS,

FLUID GUAGES, &c.

The flattering Testimonials we are receiving from Gas Officers, accompanied with expressions of such general satisfaction, and the fact of a tried experience for fourteen years, must present itself as a security to parties desirous of securing the most reliable Instruments. We therefore recommend our Patent Dry Gas-Meter, believing it superior to any Meter manufactured. Messrs. J. LENNIG & Co. confine their sole attention to the business of GAS-METER making.

Our materials are the best in use; the strictest attention is given to workmanship, and we guarantee entire satisfaction to all purchasers.

Purchasers may at any time inspect our Works, and the materials of which our Meters are manufactured. We are fully prepared to execute all orders, upon the shortest notice, and it will be to the interest of parties to call upon us.

☞ Each Meter Tested Separately by a Sworn Inspector, and Sealed when desired ☜

METERS REPAIRED AND FORWARDED WITH DISPATCH.

REPORTS OF GAS-LIGHT COMPANIES.

SIXTH ANNUAL REPORT OF THE DIRECTORS OF THE JAMAICA PLAIN, MASS., GAS-LIGHT COMPANY.

The Directors of the Jamaica Plain Gas-Light Company present to the Stockholders their Sixth Annual Report:

CONSTRUCTION ACCOUNT.

The whole cost of the Real Estate, Buildings, Street Mains, Meters, and everything appertaining to the Work is		$56,847 21
Amount of Capital Stock paid in		50,300 00
Excess of Cost over the Capital, which has been taken from the earnings		$6,547 21

EARNINGS AND EXPENSES.

Received for Gas the past year		$14,247 56
" " Coke and Tar		323 73
Coal on hand, April 1, 1860		3,290 00
		$17,861 29
Expenses:		
Coal, including value of stock on hand, April 1, 1859	$7,208 14	
Salaries of Superintendent and Clerk	900 00	
Labor at the Works	1,481 00	
Sundry expenses, interest, &c.	2,254 31	11,843 45
Net Earnings the past year		$6,017 84
Add balance of Earnings, April 1, 1859		6,057 31
		$12,075 15
Deduct two Dividends paid the past year		3,828 00
Balance of Net Earnings, April 1, 1860		8 247 15

As appears in the Statement above of the Construction Account, there has been taken from this balance of $8,247 15 the sum of $6,547 21, to pay for real estate and other additions to the works.

LIABILITIES.

In Notes and Unpaid Dividends	$2,937 00

ASSETS.

Cash on hand	$1,422 11	
Coal on hand	3,290 00	4,712 11

The Directors have, during the past year, issued additional stock to the amount of $4,600. This has been rendered necessary to pay for land adjoining the works which they deemed essential for the company to own in view of the future increase of business, and also to defray the expense of additional street mains.

INCREASE OF BUSINESS.

Sales of Gas for eighteen months, ending—			
April 1, 1855	$5,966 62	Net Profit,	$787 30
" 1856, for one year	6,802 59	" "	1,620 82
" 1857, " "	8,243 60	" "	2,200 54
" 1858, " "	9,663 05	" "	2,752 89
" 1859, " "	11,656 48	" "	4,984 76
" 1860, " "	14,247 56	" "	6,017 84

The constant and rapid increase of the business of the Company leaves no room to doubt that it will be necessary soon to erect another gasholder. The one now in use must, in the course of a year, be altogether too small.

The Directors will ask authority of the Stockholders to build a tank and gasholder of larger dimensions, to be enclosed with a substantial brick building and slated roof, the expense of the same to be defrayed either by the issue of new stock or by a loan to be met by annual instalments, as the stockholders may decide.

In behalf of the Directors,

JOHN C. PRATT, *President.*

JAMAICA PLAIN, MASS., May 1, 1860.

LAW REPORTS.

COURT OF APPEALS—STATE OF NEW YORK,

Decision, June Term, 1860.

Judgment of the Supreme Court reversed, with costs and judgment of the Special Term affirmed. The People of the State of New York vs. James Bowen and others (the Metropolitan Gas-Light Company.)

SUPREME COURT—IN CHAMBERS.

DEMAND FOR A DEPOSIT CONTESTED.

The People ex. rel. George Peckham vs. The Manhattan Gas-Light Company.—This was a *mandamus* sued out to test the right of the defendants to exact a deposit before furnishing gas to consumers. It appeared by the papers that the relator, George Peckham, lessee of a store in Gibson's Building, corner of Broadway and Thirteenth-street, required from the Manhattan Gas-Light Company a supply of gas for that store. The Company demanded a deposit to be made, as required by the rule adopted by them a year or two since, and which has been the cause of frequent complaint. Mr. Peckham refused to make a deposit and the Company refused to supply the gas.

Ethan Allen, Esq., attorney for Mr. Peckham, thereafter made a formal demand upon the Vice-President, on behalf of Mr. Peckham, to be furnished with three thousand cubic feet of gas at the store, and made a formal tender of $7 50 in prepayment of the gas, but this was also refused.

On affidavits showing these facts, Justice Ingraham at the Chambers of the Supreme Court, granted a *mandamus* requiring defendants to furnish the gas, or to show cause why they refused, &c.

The order was issued, and was served upon the Company on the 28th day of June. On the same day the Company complying with the order of the Court, agreed to furnish Mr. Peckham with the gas required, upon the terms offered by him, no deposit fee for meter being asked or paid. The gas has been furnished accordingly.

The order of the Court having been complied with, no return was made to the writ of *mandamus* on the 6th day of July instant, by the defendants.

George Peckham and Ethan Allen, Attorneys for petitioner.

FOREIGN NEWS.

SUIT AGAINST THE LONDON GAS-LIGHT COMPANY FOR INFRINGEMENTS.—A suit was tried in the Vice-Chancellor's Court June 6, brought by Mr. Frank Clark Hill, of Deptford, England, a well-known manufacturing chemist, against the London Gas-Light Company for an injunction to restrain their alleged infringement of his Letters Patent, wherein he claims first, the purifying coal gas from sulphuretted hydrogen, cyanogen, and more or less perfectly from ammonia, by passing it through the precipitated or hydrated oxydes of iron, or the subsulphates or oxyclorides of iron, from whatever source obtained, either by themselves, or made into a more porous material by being absorbed into or mixed with sawdust or breeze or other material; and, secondly, the repeatedly renovating or re-oxidizing the purifying materials by the action of the air whenever they cease to absorb sulphuretted hydrogen, so that they may be used over and over again to purify the gas; with a third claim, which is not material. Mr. Hill's Letters Patent have been the subject of repeated litigation with this company and other parties. This suit was first tried in 1856 in the Court of Exchequer, when the plaintiff was, at the end of the second day, non-suited. In November, 1857, the non-suit was set aside, and a second trial was had in 1858, which lasted five days, resulting in a verdict for plaintiff on all the issues, leave being reserved to the defendant to move on several points of law. The defendant applied subsequently for an order to set aside the verdict, which was refused, thus establishing Mr. Hill's claims. The plaintiff then commenced this proceeding for an injunction. The defendants admitted that they had infringed Mr. Hill's Letters Patent if valid, but contended that, for some time past, they had adopted exclusively the use of a process which was different from that of the plaintiff, and was a process patented by Mr. Frederick John Evans, entitled "An improvement applicable to gas-purifying."

The Vice-Chancellor directed that an order be issued granting an injunction, unless the defendants gave an undertaking not to infringe the plaintiff's patent, and they were to be at liberty to use Mr. Evans' patent, keeping an account in respect of that process, so that at the conclusion of a suit to be brought by Mr. Hill, to ascertain what, if any, difference existed between his and Evans' patent, he, the plaintiff, should be protected, in case it was shown to be his patent and not Mr. Evans', which the defendant's were using. Mr. Hill's patent has but three or four years longer to run.

THE BEAUTIES OF BURNING FLUID.

Some of the burning fluid manufacturers are particularly "down" upon us for speaking of the Horrors of Burning Fluid; we therefore propose to illustrate only its beauties hereafter. For instance:

A *fluid* lamp exploded last night in the house of Samuel Cooper, Frankford. No one was injured, but the lamp was converted into a cent's worth of old brittania, and a lot of furniture blown into smithereens.

The general effect of the *mise-en-scene* was classic in the extreme.

Another: We learn from the Troy *Arena*, of the 14th May, that early on Sunday morning a maid servant named Matilda Schultz, in the employ of Mr. J. D. Green, No. 194 Eighth street, was literally burned to a crisp. About five o'clock she got up and repaired to the basement of the house for the purpose of making a fire. To start the fire she got the fluid can, containing about a quart of the dangerous liquid, and poured a part of its contents upon the kindlings. In an instant the fire communicated to that portion remaining in the can, which exploded. The poor girl was immediately enveloped in flames. She lingered in the greatest agony until half past ten o'clock, when death relieved the unfortunate girl. Mr. Green was badly burned about the hands.

Still another: A most painful case was reported to us yesterday, as having occurred Saturday evening to Miss Abbey Lahey, from Syracuse, in charge of the sewing machines of Messrs. Strong and Ould. She was at the time at her boarding house, and held in her hand a fluid lamp, one of the tubes of which contained no wick. Turning the lamp down carelessly and thoughtlessly, a sudden and serious explosion followed, burning the poor girl over the face, neck, breast, arms, hands and tongue, she, as is supposed, at the same time swallowing some of the burning fluid. Aid was immediately by her side, and Dr. Austen was sent for at once, yet she will bear the marks for life, and her fingers are some of them crippled. She is an excellent young woman, about nineteen years of age. Though suffering great pain, the injuries are not supposed to be fatal.

FRANCISCA NICKEINBER, a native of Germany, aged 33 years, died at No. 18 Leonard street on the 26th May from the effects of burns, received by the explosion of a lighted burning fluid lamp upon her person.

MRS. ELLEN MYER, living in Montross avenue, near Smith street, E. D., received serious and perhaps fatal injuries by the explosion of a fluid lamp which she was filling while lighted. Two men who ran to her assistance were also severely burned about the hands and face in their efforts to extinguish the fire, which had communicated from the woman's clothes to several things in the house.

SIX PERSONS INJURED—ONE FATALLY.—About 2½ o'clock yesterday afternoon a pedlar called at the house of Mrs. Peer, No. 182 Hudson avenue, to sell patent fluid lamp safety-tubes. He placed one of the tubes on a glass lamp, partially filled with burning fluid and lighted it. To convince the family that a lamp made with such a tube could not be made to explode, he gave it a violent shaking, when the lamp exploded, injuring one person, a child fatally, and five others more or less severely. Every person in the room, except a child 13 years of age, who was alarmed by the motions made with the lamp and crawled under a table, was injured.

OUR Western exchanges tell us that Jesse Martindale of Warren County, Ind., died lately from burns produced by the explosion of a fluid lamp. Mrs. Dugan of the same county, died also of burns produced by the explosion of a fluid lamp. Mrs. George Seiders, of St. Louis, was dreadfully burned about the head and breast by the explosion of a fluid lamp. All the hair was burned from her head, and she cannot live. Margaret Clarkson, of Cincinnati, was most horribly burned on Friday. Her chest, abdomen and limbs were charred almost to blackness, while her hands and arms were injured so badly as to render them wholly useless. She cannot recover.

A GERMAN boy, about fourteen years old, employed in the workshop of William Wiswell, No. 70 West Fourth-street, was seriously injured, yesterday forenoon, by the explosion of a camphene lamp, while attempting to fill it from a can, without extinguishing the flame; the fluid ignited, causing a report like the discharge of a gun, and threatening for a time to set fire to the building. The boy's face was badly disfigured, and his hair burnt from his head. He is not thought to be dangerously injured.

MRS. HARRIET HARITAGE, a lady 41 years of age, residing at No. 31 West Thirteenth street, died on Tuesday night in consequence of dreadful burns received on Sunday last by the bursting of a fluid lamp.

ABOUT eleven o'clock Saturday evening, May 22, a girl named Harriet Long, aged eighteen years, was horribly, if not fatally burned by the explosion of a fluid lamp, which she undertook to fill while lighted. The lamp fell from her hand to the floor, where it ignited her dress, and before the flames were extinguished the poor girl was so badly burned about the lower part of the body that her life is despaired of. Her limbs are so horribly burned that the flesh hangs loosely on them. The unfortunate girl had the presence of mind to press her clothes closely to her waist, and thus prevent the fire from extending above that point.

REPORTED "GREAT DISCOVERY" AT CHICAGO, ILL.,

MAKING GAS FROM PRAIRIE STONES.

The Chicago *Democrat* chronicles a discovery which is said to have been recently made in that vicinity. It says that a large quantity of "prairie stone," near the western suburbs of that city, has been found to yield immense quantities of gas and saltpetre. The particulars of the discovery, which was brought about while searching for indications of oil are as follows:

"A small bit of this stone, a piece perhaps four inches square, was taken by Mr. William Cumberland, a well-known chemist of this city, a day or two since, for the purpose of endeavoring to extract oil from it. The experiment, so far as the end in view was concerned, was a failure—but in the progress of it other discoveries were made of startling importance and great interest. The stone has been broken up and placed in a retort, which was then subjected to the action of the heat. A vapor was seen to issue from the neck of the retort, and on a match being applied it ignited and burned brilliantly for half an hour. It gave a light fully equal to the same volume of coal-gas, and emitted no odor of any kind! The burned stone was then analyzed, and found to contain fifty per cent. of saltpetre, which being removed, the residue was excellent lime!

"Here indeed was a discovery! A stone was found existing in inexhaustible quantities, and obtainable at very little cost, which made gas as well and as freely as the best coal; which yielded fifty per cent. of pure saltpetre, and which was then as good lime as could be had anywhere.

"Additional experiments having been performed, in the presence of the Superintendent of the Gas Works, and others, resulting in a confirmation of the discovery, arrangements have been made to experiment on the manufacture of gas from prairie stone.

"A retort and gasometer will be prepared at the gas works, and a large quantity of stone submitted to a test which will leave us no doubt of the practical benefits growing out of this unexpected discovery.

"The Chicago Stone Coal-Mining Company have, as it were, stumbled into an almost incalculable fortune. They own twenty acres of land filled with this trebly-valuable stone, and suddenly find it advancing in valu from six or eight dollars to forty or fifty a cord!"

In reply to our inquiries, we have received the following communication from the Secretary of the Chicago Gas-Light Company:

CHICAGO, July 11, 1860.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL:

All we know in regard to prairie stone for gas is what we have read in the papers. We are ready to test it whenever requested to do so, but at present have no confidence in it. The stone contains considerable bitumen, but we do not think it can ever be profitable for gas purposes. Yours,

J. R. BURTIS, *Sec.*

FISHKILL LANDING, N. Y.—Gas works are much needed here, the residence of many wealthy citizens—among them Mr. Howland, Mr. Sargeant, Judge Davies, &c.

GAS-LIGHT COMPANIES IN THE UNITED STATES.

Entered according to the Act of Congress, by John B. Murray, in the year 1860, in the Clerk's office of the District Court of the Southern District of New York.

No.	Chartered.	Town.	State.	Chart'd Capital.	Per Sh. $	Sem An'l Div.	Dividends payable.	Population of Gas District.	Pr'e per 1000 Feet
1	1857	ADRIAN	Mich.	50,000	50	..	May & Nov.	4,000	3 50
2	1856	AKRON	O	20 000	33½	..	Do.	3,500	3 00
3	1845	ALBANY	N. Y.	250,000	20	4	Jan. & July	65,000	3 00
4	1858	ALBION	N. Y.	30.0 0	100	..	Do.	3,000	3 80
5	1851	ALEXANDRIA	Va.	106,530	..	..	City Works.	9,000	3 50
6	1852	ALLEGHANY	Pa.	200 000	25	4	May & Nov.	25,000	3 00
7	1858	ALLENTOWN	Pa.	60,000	100	3½	Do.	5,000	3 50
8	1857	ALTON	Ill.	75,000	..	..	Private Works.	4,000	3 50
9	1859	ALTOONA	Pa.	40,000	20	..	May & Nov.	5,000	3 00
10	1859	AMESBURY & SALISBURY	Mass.	30.000	25	..	Do.	7,000	4 00
11	1858	ANNAPOLIS	Md.	100,000	25	..	Jan. & July	4,000	4 00
12	18 8	ANN ARBOR	Mich.	25,000	50	5	Mar. & Sept.	5,500	4 00
13	1858	ASTORIA	N. Y.	20,000	50	..	Do.	6,000	4 00
14	1865	ATLANTA	Geo.	50,000	25	5	Jan. & July	12,000	5 00
15	1855	ATTLEBORO'	Mass.	50,000	100	3	June & Dec.	6,000	4 00
16	1850	AUBURN	N. Y	80,000	50	5	Jan. & July	10,000	7 00
17	1851	AUGUSTA	Ga.	80,000	25	8	Do.	9,000	6 00
18	1853	AUGUSTA & HALLOWELL	Me.	84.700	50	5	Do.	10,000	4 00
19	1817	BALTIMORE	Md.	550,000	100	5	June & Dec.	150,000	2 50
20	1853	BANGOR	Me.	120,000	100	4	Jan. & July	12,000	3 50
21	1856	BATAVIA	N. Y.	32,000	20	4	Do.	2,500	4 00
22	1853	BATH	Me.	65,000	100	3	April & Oct.	10,000	3 75
23	1859	BATH	N. Y.	15,000	50	..	May & Nov.	3,000	7 00
24	1858	BELFAST	Me.	14,000	100	..	Jan. & July.	7,000	7 00
25	1856	BELLEFONT	Pa.	20,000	25	2	Do.	3,500	4 00
26		BELOIT	Wis.	30,000		..			
27	1854	BETHLEHEM	Pa.	23,000	50	4	June & Dec.	2,000	3 60
28	1859	BEVERLY	Mass.	40,000	100	..	Jan. & July	4,000	4 00
29	1853	BINGHAMTON	N. Y.	50,000	50	3½	Do.	10,000	4 00
30	1859	BIRMINGHAM	Pa.	40,000	50	..	Do,		
31	1859	BLOOMINGTON	Ill.	40,000	50	..	Do.	6,000	5 00
32	1853	BORDENTOWN	N. J.	50,000	25	3	June & Dec.	4,000	3 80
33	1822	BOSTON	Mass.	1,000,000	500	5	Do.	130,000	2 25
34	1859	BRATTLEBORO'	Vt.	21 000	..	..	Do.	3,000	4 00
35	1851	BRIDGEPORT	Ct.	90,000	25	4	Jan. & July	10,000	4 00
36	1857	BRIDGETON	N. J.	50,000	20	..	Do.	5,000	4 00
37	1856	BRISTOL	Pa.	30,000	25	3	Feb. & Aug.	3,000	4 00
38	1855	BRISTOL	R. I.	35,000	50	2	Jan. & July.	6,000	4 00
39	1859	BROCKPORT	N. Y.	25,000	100	3	Do.	1,500	4 00
40	1853	BROOKLINE	Mass.	45,000	100	3½	Do.	3,500	4 00
41	1825	BROOKLYN	N. Y.	2,000,000	25	5	Jan. & July	150,000	3 00
42	1848	BUFFALO	N. Y.	600 000	50	5	Do.	70.000	3 00
43	1852	BURLINGTON	N. J.	100,000	25	3	Do.	5,000	4 00
44	1853	BURLINGTON	Vt.	75,000	25	2½	Do.	10,000	4 50
45	1859	BURLINGTON	Iowa	65,000	50	..	Do.	8,000	4 00
46	1852	CAMBRIDGE	Mass.	300,000	100	5	Feb. & Aug.	20,000	3 50
47	1852	CAMDEN	N. J.	300,000	100	3	April & Oct.	10.000	3 50
48	1853	CANANDAIGUA	N. Y.	50.000	50	..	Jan. & July.	3,000	4 00
49	1856	CANTON	O.	19,000	50	5	March & Sept.	6,000	3 00
50	1853	CAPE ISLAND	N. J.	80,000	100	3	October	10,000	6 00
51	1860	CARBONDALE	Pa.	16,000	25	..			
52	1855	CARLISLE	Pa.	30,000	25	..	Jan. & July	4,000	
53	1856	CATARAUQUA	Pa.	15,000	25	5	May & Nov.	2,000	4 00
54	1858	CATSKILL	N. Y.	10,000	..	..	Private Works.	3,000	4 00
55	1857	CHAMBERSBURG	Pa.	30,000	25	..	Jan. & July	3,000	4 00
56	1846	CHARLESTON	S. C.	723,800	25	4	Do	60,000	4 00
57	1851	CHARLESTOWN	Mass.	150,000	50	4	Do.	30,000	3 25
58	1858	CHARLOTTE	N. C.	14,000	50	10	Mar. & Sept.	3,500	6 00
59	1859	CHARLOTTEVILLE	Vt.	15,000	25	..	Do.	4,000	4 50
60	1851	CHELSEA	Mass.	100,000	100	3½	Jan. & July'	8,000	3 50
61	1853	CHESTER	Pa.	35,00	25	3	April & Oct.	4,000	4 00
62	1842	CHICAGO	Ill.	1,800,000	25	5	Jan. & July	100,000	2 50
63	1857	CHICOPEE	Mass.	50,000	20	..	Do.		4 00
64	1851	CHILLICOTHE	O.	40,000	25	4	Do.	12,000	3 50
65	1841	CINCINNATI	O.	1,600,000	100	5	Do.	225.000	2 50
66	1850	CITIZENS', BROOKLYN	N. Y.	1,000,000	20	..	Do.	275 000	2 50
67		CLARKESVILLE	Tenn.	100,000	50	..	Do.	5,000	4 00
68	1860	CLAREMONT	N. H.	20,000	..	..	Do.	3,000	4 00
69	1841	CLEVELAND	O.	200,000	10	5	Do.	20.000	3 00
70	1856	CLINTON	Mass.	30,000	500	5	Do.	3,000	4 00
71	1854	CLYDE	N. Y.	20,000	100	..	Do.	2,500	4 00
72	1854	COHOES	N. Y.	50,000	20	3½	April & Oct.	5,000	3 60
73	1850	COLD SPRING	N. Y	30 000	50	..	Do.	3,500	6 00
74	1852	COLUMBIA	Pa.	37,500	25	..	Jan. & July.	4,000	3 50
75	1852	COLUMBIA	S. C.	44,000	25	4	Do.	6,000	6 00
76	1857	COLUMBIA	Cal	50,000	25	..	Do.	4,500	10 00
77	1853	COLUMBUS	Ga.	54.000	25	5	Do.	5,000	7 00
78	1850	COLUMBUS	O.	100,000	10	6	Do.	30,000	3 00
79	1854	CONCORD	N. H	50,000	50	4	Do.	8,000	3 50
80	1853	COVINGTON & NEWPORT	Ky.	100,000	50	3½	Do.	28,000	4 00
81	1854	CUMBERLAND	Md.	60,000	50	3	Do.	6,000	4 00
82	1857	DANBURY	Ct.	50 000	25	4	Do.	2,000	4 00
83	1856	DANVILLE	Pa.	30,000	25	..	June & Dec.	3,000	4 00
84	1855	DAVENPORT	Iowa.	56.000	100	..	Do.	6,000	5 00
85	1848	DAYTON	O.	50,000	25	5	Feb. & Aug.	10,000	4 00
86	1853	DEDHAM	Mass.	40,000	50	..	Jan. & July.	3 000	4 00
87	1849	DETROIT	Mich.	500 000	50	5	Do.	30 000	3 50
88	1854	DORCHESTER	Mass	150,000	100	..	Do.	17,000	4 00
89	1859	DOVER	Del.	12,000	..	..	Private Works.	2,000	4 00
90	1857	DOYLESTOWN	Pa.	50,000	..	..	Jan & July.	3 000	4 00
91	1854	DUBUQUE	Iowa	100,000	50	..	Do.	17,000	4 50
92	1853	EAST BOSTON	Mass.	133,000	25	4	Do.	26,000	3 50
93	1858	EAST GREENWICH	R. I	11,200	100	15	Do.	3,000	7 00
94	1857	EASTON	Md.	9,000	10	..	Do.	1,500	7 00
95	1850	EASTON	Pa.	125,000	5	4	June & Dec.	6,000	3 60
96	856	EASTPORT	Me.	50,000	25	..	Do.	3 000	4 00
97	855	ELIZABETH	N. J	100 000	20	4	Jan. & July.	14,000	3 50
98	1852	ELMIRA	N. Y.	50,000	25	3½	Do	5,000	4 00
99	1852	ERIE	Pa.	68,000	50	3½	June & Dec.	10,000	3 00
100	1853	EVANSVILLE	Ind.	60,000	50	4	Jan. & July	12,000	4 00
101	1847	FALL RIVER	Mass.	26,000	..	..	Private Works	12 000	3 50
102	1859	FAYETTEVILLE	N C	25.000	100	6	Jan & July.	7,000	6 00
103	1857	FISHKILL	N. Y.	10,000	10	..	Do.	1,500	6 00
104	1853	FITCHBURG	Mass	100.000	50	3	Do.	5,000	4 00
105	859	FLEMINGTON	N. J.	20,000	..	..	Do.	3,000	4 00
106	1855	FLUSHING	N. Y.	41,000	50	1½	Mar. & Sept.	6,500	4 00
107	1858	FORT WAYNE	Ind.	50.000	25	..	Do.	6,000	4 00
108	1851	FRANKFORT	Ky	30,000	..	..	City Works.	5,500	4 50
109	1851	FREDERICK CITY	Md.	36,000	100	..	Jan. & July	5,000	6 70
110	1854	FREDERICKSBURG	Va.	72,500	50	5	Do.	4,500	4 00
111	1858	FREDONIA	N. Y.	10,000	100	..	Do.	2,000	4 00
112	1856	FREEPORT	Ill.	20,000	100	..	May & Nov.	10,000	4 00
113	1859	FREMONT	O.	25,000	25	..	Do.	2,000	4 50
114	1858	FULTON	N. Y.	12,000	100	..	Do.	4,000	7 00
115	1855	GALENA	Ill.	70,000	100	..	Do.	8,000	4 00
116	1858	GALVESTON	Texas.	160,000	50	..	Do.	7,000	6 00
117	1854	GARDINER	Me.	100,000	50	4	Do.	3,000	
118	1854	GENEVA	N. Y.	75,000	25	2½	Do.	6,000	4 00
119	1851	GERMANTOWN	Pa.	Merged	into	the	Philad. Works.	12 000	2 25
120	1854	GLENN'S FALLS	N. Y.	35,000	50	3	Feb. & Aug.	4,000	4 00
121	1854	GLOUCESTER	Mass.	40,000	50	..	Jan. & July	5,000	3 50
122	1857	GLOVERSVILLE	N Y.	15,000	25	..	Do.	3,000	3 50
123	1858	GRAND RAPIDS	Mich	50,000	20	..	Do.	3,000	4 00
124	1856	GREAT BARRINGTON	Mass.	5,000	100	5	April & Oct.	2,000	7 00
125	1849	GREAT FALLS	N. H.	50,000	100	3	Do.	3,000	4 00
126	1855	GREENPOINT	N. Y.						2 00
127	1859	GREENSBORO'	N. C.	12,000	50	..	Do.	3,000	7 00
128	1856	GREENSBURG	Pa.	30,000	25	4	May & Nov.	2,000	3 00
129	1854	HAGERSTOWN	Md.	15,000	20	..	Jan. & July	2,000	6 00
130	1859	HANNIBAL	Mo.	100,00	100	..	Do.	6,000	3 50
131	1857	HARLEM	N. Y.	350,000	50	3½	Do.	25,000	3 00
132	1855	HARRISBURG	Pa.	100,000	..	4	Do.	5,000	4 00
133	1849	HARTFORD	Ct.	200,000	25	4	Do.	25,000	3 00
134	1853	HAVERHILL	Mass.	50,000	50		Do.	8,000	4 00
135	1859	HAVERSTRAW	N. Y.	20,000	100		Do.	5,000	4 00
136	1859	HEMPSTEAD	N. Y.	16.000	25		Do.	1.000	4 00
137	1856	HOLLIDAYSBURG	Pa.	30,000	25	3	Do.	4,000	3 50
138	1854	HONESDALE	Pa	30,000	25	3	Do.	2,500	4 00
139	1853	HUDSON	N. Y.	50,000	100	3½	Feb. & Aug.	3,000	4 00
140	1857	HUNTINGTON	Pa.	18,000	50	3	Do.	2,000	3 50
141	1856	HUNTSVILLE	Ala.	7,325	25	..	June & Dec.	2,000	5 00
142		INDIANAPOLIS	Ind.	150,000	..		Do.		5 00
143	1857	IOWA CITY	Iowa.	40,000	50		Feb. & Aug.	4,000	4 50
144	1852	ITHACA	N. Y.	75,000	25	3½	Jan. & July	6,000	4 00
145	1857	JACKSON	Mich.	25,000	50	5	Do	6,000	3 50
146		JACKSON	Miss.	80 000	50	..	Do.		4 50
147		JACKSON	Cal.	50 000	30	..	Do.		10 00
148		JACKSONVILLE	Flor.	30,000	20	..	Do.		7 00
149		JACKSONVILLE	Ill.	50 000	50	..	Do.		5 00
150	1858	JACKSONVILLE	Mo.	25,000	25	..	Do.	7,000	6 00
151	1856	JAMAICA	N. Y.	20,00	..	4	Do.	6,000	4 00
152	1853	JAMAICA PLAIN	Mass.	10,000	100	4	Do.	3,000	4 00
153	1856	JANESVILLE	Wis.	50,000	100	..	Do.	12,000	4 00
154	1858	JERSEY CY. & HOBOKEN	N. J.	300,000	..	5	Jan & July	30,000	3 00
155	1858	JERSEY SHORE	Pa.	15,000	25	..	Do.	2,000	3 70
156	1856	JOHNSTOWN	Pa.	80,000	25	3	Do.	8,000	3 00
157	1857	JOLIET	Ill.	300,000	100		June & Dec.	6,000	4 00
158	1858	KALAMAZOO	Mich.	20,000	50	5	Do.	10,000	4 00
159	1860	KEENE	N. H.	60,000	100	..	Do.	4.500	4 00
160	1855	KEOKUK	Iowa.	100,000	100		Jan. & July	10,000	4 50
161	1855	KINGSTON	Pa.	50 000	50		Do.	3,000	4 00
162	1854	KNOXVILLE	Tenn.	63,000	..		April & Oct.	4,000	5 00
163	1860	LACONIA	N. H.	20,000	100		Do.	4,000	6 00
164	1859	LA CROSSE CITY	Wis.	100,000	50		June & Dec.	10,000	5 00
165	1854	LAFAYETTE	Ind.	60,000	50	4	Jan. & July	8,000	3 25
166	1856	LAMBERTVILLE	N J.	30,00	25		Do.	2,500	4 00
167	1849	LANCASTER	Pa.	100 000	50	4	Do.	10,000	3 00
168	1856	LANCASTER	O.	25,000	100	5	Do.	5,000	3 50
169	1855	LANSINGBURG	N. Y.	25,000	100		Private Works.	7,000	4 00
170	1849	LAWRENCE	Mass.	200,000	100	4	Feb & Aug.	15,000	3 50
171	1859	LEAVENWORTH	Kans.	200,000	25		Jan. & July	10,000	5 00
172	1856	LEBANON	Pa.	20,000	50		Feb. & Aug.	5,000	4 00
173	1858	LEWISBURG	Pa.	20,000	100		Jan. & July.	4,000	4 00
174	1856	LEWISTON	Me.	100,000	20	3	Do.	6,000	4 00
175	1856	LEWISTOWN	Pa.	80,000	50	3	April & Oct.	3,000	3 50
176	1853	LEXINGTON	Ky.	100,000	25	4	Jan. & July	5,000	4 00
177	1853	LITTLE FALLS	N. Y.	12,000	25		Do.	3 500	7 00
178	1858	LOCKHAVEN	Pa.	28,000	..		Do.	3,000	4 00
179		LOCKPORT	N. Y.	100,000	50				
180	1838	LOUISVILLE	Ky.	600,000	50	6	Do.	80,000	2 70
181	1849	LOWELL	Mass.	200,000	25	5	Do.	50,000	3 25
182	1852	LYNCHBURG	Va	70,000	25	5	Do.	6,000	3 50
183	1852	LYNN	Mass.	55,000	50	4	Do.	20,000	4 00
184	1859	LYONS	N. Y.	30,000	100		Do.	4,000	4 00
185	1852	MACON	Ga.	75,160	25	6	Do.	5,000	5 00
186	1851	MADISON	Ind.	160,000	25	3	Do.	10,000	3 50
187	1856	MADISON	Wis.	100,000	25		Do.	5,000	5 00
188	1854	MALDEN & MELROSE	Mass.	50,500	25	3	Feb. & Aug.	5,000	4 00
189	1852	MANAYUNK	Pa.	40,000	100		Do.	7,000	4 00
190	1852	MANCHESTER	N. H.	100,000	50	5	Jan. & July	25,000	3 00
191	1830	MANHATTAN (N.Y.Cy.)	N. Y.	4,000,000	50	5	Do.	600,000	2 50
192		MANSFIELD	O.	25,000	..		Do.		4 00
193	1854	MARBLEHEAD	Mass.	40,000	100	3	Do.	1,100	4 00
194		MAUCH CHUNK	Pa.	50,0 0	50		Do.		4 00
195	1857	MARIETTA	O.	50.000	50	..	Do.	7,000	4 00
196	1858	MARYSVILLE	Cal.	50,000	100		Jan. & July	4,000	12 50
197	1857	MASSILON	O.	20,000	25		Do.	5 000	8 00
198	1855	MEADVILLE	Pa.	39.500	25		Do.	4,000	3 50
199		MEDINA	N. Y.	2,000	100	..	Do.	2,000	7 00
200	1852	MEMPHIS	Tenn.	300,000	100	5	June & Dec.	12,000	3 50
201	1859	METROPOL'N, (N Y Cy)	N. Y.						
202	1859	MIDDLEBORO'	Mass.	18,000	..		Private Works.		6 00
203	1853	MIDDLETOWN	Ct.	50,000	25	3	March & Sept.	5,000	3 80
204		MIDDLETOWN	N. Y.	10 000	25	..			
205		MILFORD	Mass.	20,000	..		Do.		4 00
206		MILLEDGEVILLE	Ga.	100 000	50				5 00
207		MILWAUKIE	Wis.	400,000	50	5	Jan. & July	24,000	3 50
208	1852	MOBILE	Ala.	200,000	..		Do.	80,000	4 50
209	1836	MONROE	Mich.	50,000	100		Do.		4 00
210	1852	MONTGOMERY	Ala.	100,000	25	4	Feb. & Aug.	7,000	6 00
211	185	MONTPELIER	Vt.	80.000	25	3	Jan. & July	8,000	5 00
212	1859	MORRISANIA	N. Y.	30 000	50		Do.		4 00
213	1859	MORRISTOWN	N. J.	18.000	50		Do.	3.500	4 00
214	1854	MOUNT HOLLY	N. J.	16,650	25	3	April & Oct.	2,000	7 00
215		MOUNT VERNON	O.	50,000	100		Do.		4 00
216	1857	MUSCATINE	Iowa	50,000	100	..	Jan. & July	3,000	4 50
217	1854	NANTUCKET	Mass	50,000	100	3	Feb. & Aug.	6,000	4 00
218	1852	NASHUA	N. H.	45 000	50	3½	Jan. & July	10,000	3 50
219	1850	NASHVILLE	Tenn	200,000	50	5	Do	25 000	3 50
220	1858	NATCHEZ	Miss.	46,000	50		Do.		5 00
221	1852	NEW ALBANY	Ind.	200,000	50	3½	Do.	16 000	3 50
222	1846	NEWARK	N. J.	300,000	50	5	Do.	45,000	3 00
223	1856	NEWARK	O	30,000	100	..	Do.	7,000	5 40
224	1852	NEW BEDFORD	Mass	130,000	100	5	Do.	15,000	4 00
225	1859	NEWBERN	N. C.	22 000	100	6	Do.	6,000	3 50
226		NEW BRITAIN	Ct.	30,000	20	5	Do.	3.000	
227	1851	NEW BRUNSWICK	N. J.	100.000	20	4	Do.	8,000	3 80
228	1852	NEWBURG	N. Y.	67,000	20	4	Do.	10000	4 00
229	1852	NEWBURYPORT	Mass.	150,000	10	4	Do.	9,000	4 00
230	1857	NEWCASTLE	Del.	32,300	10	3	Do.	4,000	4 00
231	1847	NEW HAVEN	Ct.	200,000	25	4	Do.	30,000	3 50
232	1853	NEW LONDON	Ct.	70.000	50	3	Do.	12,000	4 00
233	1835	NEW ORLEANS	La.	1,500,000	100	6	Do.	120,000	4 50
234	1853	NEWPORT	R. I.	130,200	100	4	Do.	10,000	5 50
235	1854	NEWTON & WATERTOWN	Mass.	300,000	100	2	Do.	10,000	4 00
236		NEWTON	N. J.	30,000	..				4 00
237		NEWTON	Pa.	20,000	50				4 00
238	1823	NEW YORK	N. Y.	1,000,000	50	5	May & Nov.	100,000	2 50
239	1859	NIAGARA FALLS	N. Y.	15,000	25		Do.	3,000	4 00
240		NORFOLK	Va.	60 000	25				4 00
241	1853	NORRISTOWN	Pa.	41 700	25	4	June & Dec.	8,000	3 50
242		NORTHERN LIBERTIES	Pa.	400,000	25	7½	Mar. & Sept.		2 50
243	1856	NORTHAMPTON	Mass.	35,000	..	..	Do.	4,500	4 00
244	1859	NORTHBRIDGEWATER	Mass.	50,000	100	..	Do.	1,000	6 50
245	1856	NORWALK	Ct.	30,000	50	4	Feb. & Aug.	6,000	4 00
246	1859	NORWALK	O.	30 000	25		Jan. & July	4,000	4 00
247	864	NORWICH	Ct.	75.000	25	3½	Do.	12,000	3 50
248	1859	NYACK	N. Y	20,000	100	..	Do.	2,500	4 00
249	1860	OBERLIN	O.	10.000	..	..	Do.	1,200	4 00
250	1855	OGDENSBURG	N. Y.	75,000	50	5	Do.	9,000	4 00
251		ORANGE	N. J.	65,000	25		Do.		3 50
252	1852	OSWEGO	N. Y.	81,250	100	3½	Do.	15,000	4 00
253	1855	OTTAWA	Ill.	45,000	100	6½	Do.	6,000	4 00
254	1856	OWEGO	N. Y.	40,000	50	3½	Do.	5,000	4 00
255	1856	PADUCAH	Ky.	75,000	100	..	May & Nov.	4,000	5 00

GAS-LIGHT COMPANIES IN THE UNITED STATES.

Entered according to the Act of Congress, by John B. Murray, in the year 1860, in the Clerk's office of the District Court of the Southern District of New York.

No.	Chartered.	Town.	State.	Charter'd Capital	Per Sh. $	Sem An'l Div.	Dividends payable.	Population of Gas District.	Price per 1000 feet.
256	1845	Painsville	O	200,000	50	5	May & Nov.	2,500	5 00
257	1856	Palmyra	N. Y.	12,000	5	..	Jan. & July	3,000	7 00
258	1847	Paterson	N. J.	110,000	50	3	Do.	13,000	3 50
259	1850	Pawtucket	R. I.	65,000	50	5	Do.	10,000	3 50
260	1855	Peekskill	N. Y.	31,000	50	3	June & Dec.	4,000	4 00
261	1859	Peoples', Chicago	Ill.	500,000	50	New	Do.	100,000	2 50
262	1855	Peoria	Ill	100,000	50	4	Do.	8,000	3 50
263	1852	Petersburg	Va.	120,000	..	5	Jan. & July.	20,000	3 80
264	1841	Philadelphia	Pa.	3,000,000	50	..	City Works.	650,000	2 25
265	1855	Piqua	O.	50,000	50		Jan. & July	6,500	4 00
266	1835	Pittsburg	Pa.	300,000	100	5	Do.	60,000	1 50
266	1854	Pittsfield	Mass.	40,000	100	4	Do.	4,000	4 00
267	1858	Placerville	Cal.	30,000	50	..	Do.	4,500	10 00
268	1859	Plattsburg	N. Y.	16,000	50	..	Do.	5 000	7 00
269	1853	Plymouth	Mass.	40,000	100	..	April & Oct.	8,000	4 00
270	1849	Portland	Me.	250,000	50	4	Jan. & July.	30,000	3 50
271	1859	Portland	Oreg.	50 000	50	..	Do.	3,500	8 00
272	1859	Port Lavacca	Texas	50,000	100	..	Do.	2,500	7 00
273	1851	Portsmouth	N. H.	60,000	100	4	April & Oct.	8,500	3 83
274	1855	Portsmouth	O.	50,000	50	4	Jan. & July	10,000	3 50
275	1855	Portsmouth	Va.	100,000	50	4	Do.	4,000	4 00
276	1856	Pottstown	Pa.	20,000	50	3	Do.	3 500	4 00
277	1850	Pottsville	Pa.	110 000	50	2	Do.	10.000	3 50
278	1850	Poughkeepsie	N. Y.	70,000	50	4	Mar. & Sept.	15,000	4 00
279	1848	Providence	R. I.	1,000,000	50	4	Jan. & July	60,000	3 00
280	1853	Quincy	Ill.	300,000	50	4	June & Dec.	12,000	3 50
281	1855	Racine	Wis.	43,500	26		Do.	7,000	3 50
282	1857	Rahway	N. J.	50,000	20		Jan. & July	5,000	4 00
283	1858	Raleigh	N. C.	25,000	100	6	May & Nov.	5,000	6 00
284	1848	Reading	Pa.	100,000	25	4	Jan. & July	25 000	3 00
285	1851	Richmond	Va.	341.975	..	..	City Works.	30,000	3 00
286	1859	Richmond	Mass.	40.000	25	..	Jan. & July	3.000	4 00
287	1859	Ripley	O.	30,000	50	..	Do.	2,000	4 50
288	1852	Rochester	N. Y.	200,000	50	5	Do.	50,000	2 50
289	1857	Rockford	Ill.	40.000	50		Do.	4.000	4 00
290	1854	Rock Island	Ill.	100,000	50		Do.	6.000	4 50
291	1854	Rockland	Me.	50,000	100		Do.	6,000	4 40
292	1852	Rome	N. Y.	35.000	100	3½	Do.	10,000	3 60
293	1854	Rondout & Kingston	N. Y.	65,150	20	3½	June & Dec.	10,000	3 80
294	1854	Roxbury	Mass.	150,000	100	5	Jan. & July	20,000	3 50
295	1859	Rutland	Vt.	20,000	25	..	Do.	4,000	3 50
296		Saco	Me	71,600	100	3½	April & Oct.		4 00
297	1857	Sacramento	Cal.	500,000	100		Do.		10 00
298	1859	Sag Harbor	N. Y.	20,000	..		Do.		4 00
299	1858	Saint Albans	Vt.	15 000	20	..	April & Oct.	3,000	7 00
300		Saint Johnsbury	Vt.	30,000	25				4 00
301	1857	Saint Joseph	Mo.	50.000	100	5	Jan. & July	6,000	5 00
302	1839	Saint Louis	Mo.	600,000	50		June & Dec.	180,000	3 50
303	1857	Saint Paul	Min.	200,000	50	3	Jan. & July	10,000	6 00
304	1856	Salem	N. J.	30.000	25	3	Do.	5,000	3 86
305	1850	Salem	Mass.	200 000	100	4	Feb. & Aug.	30,000	3 24
306	1859	Salem	O.	25,000	20		Do	3 000	3 00
307	1859	Salisbury	N. C.	14.000	50	6	May & Nov.	3,500	6 00
308		Salmon Falls	Me.	25,000	100	..	Do.		
309		San Antonio	Texas	75,000	20	..	Do.		
310		San Diego	Cal.	30,000	50	..	Do.		6 00
311	1854	Sandusky	O.	75.000	50	..	April & Oct.	9 000	10 00
312	1859	Sandwich	Mass.	16,000	..	..	Private Works.	2,000	3 00
313	1852	San Francisco	Cal.	1,000,000	100	6	Do.		3 50
314	1858	Saratoga Springs	N. Y.	39,000	100	..	Jan. & July	6 000	8 00
315	1849	Savannah	Ga.	200,000	25	5	Do.	10 000	3 60
316	1851	Schenectady	N. Y.	50,000	..	..	Private Works.	11 000	3 75
317	1858	Scranton Gas & Water	Pa.	100 000	25	..	Jan. & July	6.000	4 00
318	1857	Selma	Ala.	20,000	100	..	Do.	2,000	3 80
319	1856	Seneca Falls	N. Y.	80,000	50	2	Do.	6,000	5 00
320		Shreveport	La.	40,000	25		Do.		4 00
321	1856	Sing Sing	N. Y.	40,000	100	..	Do.	3,000	4 50
322	1859	South Bridge	Mass.	5,000	25		Do.	4,000	4 00
323		South Boston	Mass.	200,000	50		Jan. & July		6 00
324		Springfield	O.	200,000	100				3 25
325	1854	Springfield	Ill.	75,000	50		Do.	10 000	3 50
326	1848	Springfield	Mass	100 000	500	5	Feb. & Aug.	10,000	3 60
327	1855	Stamford	Ct.	21,000	25	5	April & Oct.	3.000	4 00
328	1857	Staten Island	N. Y	150 000	50	5	Jan. & July	26 000	4 00
329	1859	Staunton	Va.	18,000	50	6	Do.	4,000	7 00
330		Steubenville	O.	150 000	100		Do.		4 00
331		Stockton	Cal.	50,000			Do.		10 00
332	1848	Syracuse	N. Y.	125,000	25	5	Mar. & Sept.	25,000	3 00
333		Tamaqua	Pa.	40 000	25		Do.		4 00
334	1859	Tarrytown & Irv't'n.	N. Y.	70 000	50		Jan. & July	3,000	4 00
335	1853	Taunton	Mass	150 000	50	4	Do.	10,000	4 00
336		Terre Haute	Ind.	100,000	00	..	Jan. & July		4 00
337		Thompsonville	Ct.	25,000	50	..	Do.		4 50
338		Tiffin	O.	25,000	20	..	Do.		4 00
339	1858	Toledo	O	100,000	50	3	Do.	8,000	3 50
340	1847	Trenton	N. J.	100.000	20	4	Do.	15,000	3 60
341	1848	Troy	N. Y.	200 000	100	4	June & Dec.	35,000	3 60
342	1856	Urbana	O	30,000	25	..	Do.	3,500	5 00
343	1849	Utica	N. Y.	80,000	100	4	April & Oct.	22,000	4 60
344	1858	Vicksburg	Miss.	66.000	50		Mar. & Sept.	4,000	4 50
345	1859	Vincennes	Ind.	25,000	100		Jan. & July	2,000	4 00
345	1858	Walden	N. Y.	2,500	..	..	Private Works	1,000	6 00
347	1853	Waltham	Mass	100 000	100	4	Jan. & July	3,000	4 00
348	1857	Ware	Mass.	30 000	20	..	Do.	3,500	4 00
349	1854	Warren	R. I.	20 000	25	..	Do.	3.000	4 00
350	1855	Washington	D. C.	500 000	20	5	Jan. & July	50,000	3 25
351	1859	Washington	N. C.	15 000	100	..	April & Oct.	1,500	6 00
352	1848	Washington	Pa.	30 000	20	..	Do.	4 000	3 00
353	1854	Waterbury	Ct.	100.000	25	..	Jan. & July	4 000	4 00
354	1852	Waterford	N. Y.	12,000	25	..	Do	4 000	4 00
355	1852	Watertown	N. Y.	20 000	100	..	Do.	10 000	7 00
356	1856	Watertown	Wis.	25.000	100	..	Do.	5,000	5 00
357	1858	Wautoma	Wis.	30 000	50	..	Do.	3,000	1 50
358	1857	Waverly	Miss.	20 000	100	..	April & Oct.	4,000	5 00
359	1854	West Cambridge	Mass.	60,000	100	..	Feb. & Aug.	10,000	4 00
360	1852	Westchester	Pa.	100,000	25	2½	Do.	3,500	3 50
361	1857	West Point	N. Y.	50,000			United States	Military	2 50
362	1853	West Troy	N. Y.	100 000	50	3	Jan. & July	10 000	3 60
363	1850	Wheeling	Va.	75 000	25	6	Do.	12 000	2 70
364	1856	Wilkesbarre	Pa.	50.000	50	..	May & Nov.	4 000	3 80
365	1850	Williamsburg	N. Y.	500,000	50	5	Jan. & July	60,000	3 50
366	1858	Williamsburg	Va.	30.000	25	..	Do.	3 000	4 00
367	1857	Williamsport	Pa.	70 000	25	4	Do.	3 500	3 80
368	1859	Willimantic	Ct	12 000	..	..	Do.	2,500	3 50
369	1853	Wilmington	N. C.	60.000	50	5	Do.	8,000	5 00
370	1852	Wilmington	Del.	200 000	50	5	Feb. & Aug.	20,000	3 00
371	18 4	Winchester	Va.	36,000	50	6	Jan. & July	5 000	4 00
372	1856	Woodstock	Vt.	10,000	50	4	Do.	4 000	6 00
373	1853	Woonsocket	R. I.	82,600	100	4	April & Oct.	4,	3 50
374	1856	Wooster	O	25.000	50		Jan. & July.	6.0	3 00
375	1849	Worcester	Mass.	120,000	100	5	Do.	15,000	3 50
376	1855	Xenia	O.	40,000	50	..	Do.	3,000	4 00
377	1854	Yonkers	N. Y.	70,000	50	3½	Do.	6 500	3 80
378	1849	York	Pa.	40 000	50	3	June & Dec.	10,000	4 00
379	1858	Ypsilanti	Mich.	20 000	50	5	Feb. & Aug.	6,000	4 00
380	1859	Yreka	Cal.	30,000	100	..	Do.	2,000	10 00
381	1848	Zanesville	O.	44,600	25	4	Do.	10,000	3 50

Gas-Light Companies in the British Provinces of North America.

1	1854	Belleville	C. W.	33 640	100	4	Jan. & July	1,200	5 00
2	1854	Brantford	C. W.	32,000	100	2½			
3		Brockville	C. W.	50 000				5,000	4 00
4		Chatham	N. B.	50.000					
5		Charlotte Town	P. E. I.	50 000					
6	1857	Cobourg	C. W.	30,000			Feb. & Aug.	4,000	
7		Dundas	C. W.	30,000				6,000	4 00
8		Frederick	N. B.	50,000					
9	1843	Halifax	N. S.	160,000	40	7	May	30,000	3 00
10	1850	Hamilton	C. W	125,000	40	5	Mar & Sept.	20,000	3 50
11	1848	Kingston	C. W	80,000	100		Do.	6,000	3 50
12	1853	London	C. W.	100,000	20	5	May & Nov.	5,000	5 00
13	1847	Montreal	C. E.	800,000	40	5	Mar. & Sept.	80,000	3 00
14	1854	Ottawa	C. W.	40,000	40	..	Do.	5,000	4 50
15	1859	Point Levi	C. E.	25 000	25		Jan. & July	4,000	3 50
16	1859	Port Hope	C. W.	28 000	20	4	May & Nov.	4,500	3 50
17	1847	Quebec	C. E.	200,000	200	4	Jan. & July	60,000	3 00
18	1848	Saint Catherine's	C. W.	80,000	20		May & Nov.	7,000	4 50
19	1859	Saint Hyacinthe	C. E.	15 000	20	..	Do.	4,000	4 00
20		Saint John	N. B	170,000	80		June & Dec.	20,000	3 50
21		Saint John's	N. F.	50 000		4	Do.	30,000	
22	1858	Sorel	C. E.	14,000	20	4	Do.	4,000	3 00
23	1848	Toronto	C. W.	400,000	100	4	Feb. & Aug	50,000	3 33½

Gas-Light Companies in Cuba, Mexico and South America.

1		Callao	Chile					20,000	7 00
2		Cardenas	Cuba	50,000			Jan. & July	180,000	5 00
3	1857	Compania Cubana	Hav.	500 000	500	10	Do.		
4		Cienfuegos	Cuba				Do.	12 000	5 00
5		Guanaragoa	Cuba				Do.	14 000	5 50
6		Regla	Cuba				Do.	10 000	5 00
7		Trinidad	Cuba				Do.	16,000	5 00
8		Guyaquil	S. A.	150 000			Do.	35 000	
9		Havana	Cuba	1,250 000	500	7½	Do.	300,0 0	5 00
10		Lima	Peru	100,000			Do.	150,000	
11		Matanzas	Cuba	50 000			Do.	180,000	3 50
12		Mexico City	Mex.	550 000			Do.		
13		Montevideo	S. A.	500,000			Do.		
14		Rio de Janeiro	S. A.	1,350,000			Do.		3 00
15		San Lago	Chile	500,000			Do.	180 000	7 00
16	1857	Saint Jago de Cuba	Cuba	450,000	500		Do.	140,000	5 00
17		Valparaiso	Chile	500,000			Do.	85,000	6 00
18		Vera Cruz	Mex.	500 000			Do.		
19		Ville Clara	Cuba	50,000			Do.		

RECAPITULATION.

Entered according to the Act of Congress, by John B. Murray, in the year 1860, in the Clerk's office of the District Court of the Southern District of New York.

No.	State.	Comp's	Capital $	Coal Gas.	Aver'ge Price.	Rosin Gas	Aver'ge Price.	Square Miles.	Counties.
1	Alabama	3	320,000	3	5·16			50,722	52
2	Arkansas	None						52,198	51
3	California	9	1,790,000	9	10·05			188,982	53
4	Connecticut	14	953.000	14	3·83			4,674	8
5	Delaware	3	244,300	3	3·50			2,120	3
6	District of Columbia	1	500.000	1	3·25			60	None
7	Florida	1	30,000	1	7·00			59,268	28
8	Georgia	6	559.160	4	4·68	2	6·50	58,000	62
9	Illinois	13	2 595,000	13	3·91			55.409	17
10	Indiana	7	605.000	7	3·97			33,809	47
11	Iowa	5	355,000	5	4·40			50,914	47
12	Kansas	1	200 000	1	5·00			114,798	..
13	Kentucky	5	905 000	5	4 04			37,680	100
14	Louisiana	2	1,540,000	2	4·50			41,225	50
15	Maine	10	905,300	9	3·99	1	7·00	31,766	13
16	Maryland	6	780,000	3	3.49	3	6·60	9,3·6	20
17	Massachusetts	49	4,759,000	45	3·43	4	6·37	7,800	14
18	Michigan	8	745,000	8	3·78			56,243	63
19	Minnesota	1	200,000	1	6·00			166,924	9
20	Mississippi	4	212,000	4	4·75			47,156	59
21	Missouri	4	775 000	4	4·50			67,380	100
22	New Hampshire	9	425,000	9	3·98			7,280	10
23	New Jersey	19	1,840,610	17	3.72	2	6·50	8,320	20
24	New York	71	12.780,250	61	3·70	10	6·70	47,000	45
25	North Carolina	8	187,000			8	5·93	50 704	79
26	Ohio	30	3,338,600	29	3·93	1	7·00	39,964	87
27	Oregon	1	50,000	1	8·00			185 000	10
28	Pennsylvania	48	5.657,700	48	3·55			46,000	63
29	Rhode Island	7	1,344,000	6	3·58	1	7·00	1,306	5
30	South Carolina	2	767,800	2	5·00			29,3·5	29
31	Tennessee	4	663.000	4	4·00			45,600	43
32	Texas	3	225,000	3	6·33			237 504	78
33	Utah	None						269,170	7
34	Vermont	8	216.000	6	4·25	2	6·50	10.215	14
35	Virginia	11	1,030.000	10	3·68	1	7·00	61,352	188
36	Wisconsin	8	778,500	8	4·44			53 924	31
36	Grand Total	381	47,911,215	346	.....	35	.....	2,948,206	1,433

THE AMERICAN GAS-LIGHT JOURNAL
is published on the 1st and 15th of every month, and is specially devoted to

LIGHT, HEAT, WATER-SUPPLY, AND SEWERAGE.

Its purpose is to ascertain and make known all new discoveries in the science and economical application of LIGHT, and promote thereby the interests of companies and consumers; to encourage and aid the introduction of PURE WATER from Lakes and Rivers into Towns and Cities and to improve the system of SEWERAGE, VENTILATION, and DRAINAGE everywhere.

Incidentally with these results, the business of all Gas and Steam Fitters and Plumbers; the erection of Gas-Works and Water-Works; the consumption of Coals, the manufacture and consumption of Coal-Oils, the manufacture of Gas-Pipe, Water-Pipe, Steam-Pipe, Gas Fixtures, Gas-Meters, Wate-Meters, Retorts of iron and clay, and their valved apparatus; of Drain Pipes, Ventilating, Heating and Dredging Machines will be increased immeasurably

THERE ARE 20,000 CITIES AND TOWNS IN THE UNITED STATES, CAPABLE OF SUPPORTING GAS WORKS, WHILE THERE ARE NOT 400 GAS-WORKS IN OPERATION IN THE WHOLE COUNTRY!!!

New works are now springing up, however, every week, and they will continue to increase rapidly hereafter.

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THE
AMERICAN GAS-LIGHT JOURNAL.
ISSUED SEMI-MONTHLY.

MONDAY, JULY 16, 1860.

The annual Tables of gas-light companies will be found in this issue, the most note-worthy features of which are the decrease in the price of gas in several of the cities, and a slight increase in the number of gas-works in operation, as follows:

381	American Companies, - - - - -	47,911,215
23	Companies in British Provinces, -	2,112,040
19	Cuban, Mex., & South Am. Cos. - -	6,500,000
423	Companies. Aggregate Capital,	$56,523,255

In these Tables are not included those works for which contracts have been but just made; but the names of projected works will be published separately in future, from time to time. The Recapitulation of the Tables presents an interesting picture of the capital invested in the various States of the Union, and the average price charged for gas in each.

We omit publishing the number of consumers and public lamps supplied by the various companies, having printed them in our January number; those details, being the private statistics of the companies, are not matters of sufficient public interest to justify their regular publication.

There is no question that the lower the cost at which good gas—of say, twelve candles or higher brilliancy—is furnished, the greater will be the consumption, and necessarily the greater the profits to the manufacturers. This is beginning to be understood by gas companies, and the sooner it is acted upon, the better we are sure it will be for themselves.

The paucity of gas-works on this extended continent must strike every reader. Take New York for instance—the Empire State of the North American Confederation, with its area of 46,000 square miles or 30,080,000 acres, of which 15,000,000 are improved; its extreme length nearly 480 miles, and its breadth 310 miles; with a population of at least 4,000,000, distributed in nearly 800,000 of families, occupying, perhaps, 600,000 dwellings, in 45 counties, with 71 gas-works to light them up. *That is not much more than a gas-work to every county in the State.*

New York is filled with populous and thriving cities, towns and villages, every one of which—we need hardly except one, whose inhabitants number 500 persons—can support gas-works.

Look at Pennsylvania, with an equal area of territory—46,000 square miles or 29,440,000 acres, of which some 10,000,000 are improved, and about 4,000,000 of population. Pennsylvania has 63 counties and but 48 gas-works, and yet we believe the actual capital in gas-works owned in Pennsylvania is greater than in any other State, not excepting New York.

Massachusetts has 49 gas-works, with a territory to light up of 8,000 square miles or 5,000,000 of acres, of which, perhaps, 2,500,000 are cultivated, and a population of about 2,000,000.

Illinois has 55,400 square miles of area and 13 gas-works. No State in the Union is more blessed with jaunty little towns and enterprising people. Everybody goes to Illinois to work, and it is time they set to work at striking a light.

Ohio measures, in area, 40,000 square miles and numbers 87 counties. She has 30 gas-works, but then Ohio is full of pigs, and it would be a reflection upon that useful branch of illuminating material to slight their well-tried ability to keep the wick-ed portion of the community from utter darkness; we do not propose, therefore, to grumble at Ohio.

Great Britain, on the other hand, has 88,000 square miles and about 1,100 gas-works. Why is it that Great Britain, with not twice the area of territory contained in the single State of New York, should have fifteen gas-works to our one, and three times as many on her little island as there are in the whole United States combined? We have, surely, plenty of money and abundance of enterprise.

The subject of extending the area of gas-dom in this country is beginning to attract the attention of monied men, and they may rely upon it that a more sure and profitable investment is not to be found here or elsewhere. A hundred thousand dollars invested in three or four village gas-works will yield revenue enough for any reasonable man during his sojourn here below, and be a neat little monument to leave to his affectionate heirs when his own light shall have been extinguished by the waves of relentless Time.

We repeat that, in order to moderately light the various towns on this Continent, THERE ARE NOT LESS THAN TWENTY THOUSAND GAS-WORKS YET TO BE BUILT, and instead of concentrating the interest in mammoth corporations, they should be of moderate size and extent, economically built, honestly managed, and by the reasonable price at which they furnish light, they should and inevitably will, become the only means of meeting that universal want.

Science will be amused at the description of the new gas prairie-stone, composed of saltpetre and lime, which has been going the rounds of the "secular press." We copy it in another column, as an evidence of what *quid nuncs* manage occasionally to stumble over. Prairie-stones and mares' nests are equally curiosities in their way, and *when found* will be entitled to a niche beside Barnum's "What-is-it?" We have sent for a piece of this Blarney rock, for exhibition at our Rooms, and meantime suppose it to be a bituminous lime-stone which may probably yield a little gas, when, if the heat were high enough, lime might remain in the retort.

We are happy to observe another addition to our advertising clients in the old and extensive house of Messrs. JOHN RUSSELL & Co, the well known manufacturers of tubing for gas and water. Messrs. RUSSELL & Co. will execute orders at the lowest current rates in England, on receipt of a satisfactory credit for the amount; and as some delay must necessarily occur in the correspondence preliminary to giving orders for foreign goods, we would suggest to our English friends that a brief list of prices would be desirable to include in their advertisement, when not objectionable for other reasons.

A peremptory mandamus was issued a few days since by the Supreme Court, directing the Manhattan Gas-Light Company to supply gas to a consumer without the deposit usually required in such cases. The report of the case will be found in another column, and as there appears to be some misapprehension of the law on the subject, we print the following extracts from the Act of April 14, 1859:

§ 7. That every such gas-light company may require that all, each and every person or persons to whom such company shall supply, or shall be requested to supply gas for lighting any building, room or premises, *deposit with such company a reasonable sum of money, according to the number and size of lights used or required, or proposed to be used for two calendar months*, by such person or persons, and the quantity of gas necessary to supply the same, *as security for the payment of the gas rent*, or compensation for gas consumed, or rent of meter, pipe and fixtures, to become due to the company; provided, however, that every such gas-light company shall allow and pay to every such depositor *legal interest* on the sum by him deposited, for and during the time his deposit shall remain with the Company.

§ 9. If any person or persons supplied with gas by any such gas-light company shall neglect or refuse to pay the rent or remuneration due for the same, or for the meter, pipes or fittings, let by the company, for supplying or using such gas, or for ascertaining the quantity consumed, as required by his or their contract with the company, *or shall refuse or neglect, after being required so to do, to make the deposit in this act mentioned and thereby authorized to be required*, such company may prevent and stop the gas from entering the premises of such persons or person; and in all cases in which any such gas-light company is or shall be authorized to cut off, prevent or stop the supply of gas from any premises, their officers, agents or workmen may enter into or upon any such premises, between the hours of eight o'clock in the forenoon, and six o'clock in the afternoon, and separate, take and carry away any such meter, pipe, fittings or other property of the company, and may disconnect any meter, pipe fittings or other work whether the property of the company or not, from the mains or pipes of the company.

These requirements are not always insisted upon, however, by the companies. In the present case, the Manhattan Gas Company not only did not oppose the application, but were not represented in Court, the President being under the impression that the cause of dissatisfaction had been removed by a personal explanation which he had had with the plaintiff, some days previously.

TO BUILDERS OF WATER-WORKS.

The water-works of the city of Fayetteville, N. C., are reported to us as being sadly dilapidated, and the supply inadequate to the wants of the people. This is a good opening then for builders to erect new works, and it is believed no investment could be made to pay better. The high grounds within a mile or two of the centre of the town abound with springs and streams, which could be collected in a spacious reservoir and conducted by pipes to all parts of the town. The population is between two and three thousand.

Water-works are wanted also at Danbury, Ct., and at many other towns in various States of the Union

Builders of water-works should keep an eye upon our columns for information on the wants of the people in this branch of the economy of life.

NUMBERING OUR PAGES.

By an unaccountable oversight the pages of our last issue were wrongly numbered. They should have run from No. 1 to 16. We commence with page 17 to-day, and the only way in which the error can be rectified is for our friends to correct it in ink.

ON THE COMPARATIVE COST OF GAS AND COAL AS CALORIFIC AGENTS.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL.

In entering briefly on the comparative cost of gas and coal as applied to the production of heat, permit me to express a hope that I may not trespass within the boundary of that able and highly distinguished writer, Dr. C M Wetherill, whose elegant experiments and valuable researches on the mineral oils of America are destined to exercise a most important influence on the future history of artificial light. Presuming, however, that the path of his experiments may not necessarily lead him to the subject before us, I will, with your courtesy, introduce it to the consideration of your readers.

In the experiments on the comparative heating power of gas and coal Vol. I., (page 255) we arrived at the conclusion that 2½ lbs. of coal (average quality,) consumed under the best conditions in the furnaces of steam boilers, has an evaporating power equal to 1 lb. of gas, Sp. S. ·477, being a medium quantity between that produced from Wiggan Cannel and Newcastle gas coal. The price of coal for steam or household purposes may be taken at 20s. per ton; the cost, therefore, of 2½ lb. will be 0·27, at which price the quantity of gas of Sp. S. ·477 required for equal increments of heat has to be purchased, which in this case is 27 cubic feet (1 lb.) or at the rate of 10d. per 1000 cubic feet as the cost delivered to the consumer; but a gas of this quality could not be manufactured and sold under ordinary circumstances in this country, at a fair trading profit, below 4s. 6d. per 1000, and even at that price the manufacture would necessarily require to be carried out on a large scale. In Liverpool, under the able and enlightened management of Alfred King, Esq., the price is 3s. 9d. (90c.) per 1000 cubic feet for a quality averaging, I believe, about ·580 sp. s.; but this is an exceptional case, and one, so far as I know, without a parallel; we may therefore assume 4s. 6d. as the lowest price at which gas of this quality can be supplied to the public. Their relative costs, therefore, will stand thus:

2½ lbs. of coal at 20s. per ton, . . .	= 0·27
27 cubic feet of gas, at 4s. 6d. per 1000	= 1·458
Or, taking the cost of coal at	1·
the cost of gas will be	5·4

A result by no means favorable to the project entertained by some engineers of applying prepared gas exclusively as a fuel to the boilers of stationary engines. It does not appear that such can be done without incurring an expense of so serious a nature as very materially to outweigh any advantages to be realized by its adoption; and the present state of scientific investigation has not discovered any method, or presented to us materials from which a permanent gas can be manufactured, whether for lighting or heating purposes, that can be sold to the public at a cheaper rate than that produced from coal. The proposition, therefore, of applying *gas as fuel* to the boilers of steam engines is simply a delusion.

It will be found, however, that the relation of cost between gas and coal, as applied to steam boilers, requires to be considerably modified when the comparison has to be made with coal consumed in the ordinary manner with open fire grates; for although it appears that gas cannot compete with coal as a calorific agent where constant fires and high temperature are kept up, there are many conditions under which the relative cost may be in favor of gas. In order to arrive at a near approximation of the heating power of coal consumed under such circumstances, the average of three experiments with 5 lb. of coal, burned in the most advantageous manner in a register grate, raised 42 lbs. of water 430 units: the best effect, therefore of coal consumed in domestic fires may be taken at 3,600 units for each lb. of coal, being equal to the evaporation of 3·65 lbs. of water for 212 degrees.

In numerous cases the results will be much less than those I have found; but as we have consumed the gas to the best advantage, we are entitled to adopt the same means with coal. The equivalent, therefore, of gas of sp. s. ·477 to 2½ lbs. of coal will be 0·65 lbs. or 17·58 cubic feet.

Then, cost of 2½ lbs. of coal at 20s. per ton,	= 0·27
17·58 cubic feet of gas at 4s. 6d. per 1000 c. f.	= 0·949
Or, taking the cost of coal at	1·
The cost of gas will be	3·512

This view of the matter, however, is not to be regarded as the difference between the two systems of heating; there are many collateral circumstances and conditions to be taken in connection with the subject before their economic values can be fairly disposed of. Louis Thompson, Esq., in a valuable contribution to the "Journal of Gas Lighting" (vol. 3, p. 472) "*on the nature and chemical properties of coal gas*" has the following appropriate remarks on this subject. "To obtain a perfect estimate " of the relative money values of gas and coal as calorific " agents, we must begin by taking a comprehensive view " of the contingencies inseparably attached to both; and " perhaps, when the expense and inconveniences arising " from soot, smoke and ashes, are added to the cost of " coal, in the shape of labor for cleaning rooms, furniture " and chimneys, together with the damage thus created, " we shall find no great reason for concluding that the " general use of gas as a heating agent is either an impossible or an improbable event in the progressive " march of real civilization. As the last forty years has " seen it rapidly supersede every other form of illumination, so may the next forty years witness its adoption " for heating and ventilating our apartments."

The conditions most favorable for the adoption of gas are such where occasional fires are required, and where equal and unvarying temperatures require to be maintained. In the laboratory of the chemist, the convenience and adaptability of gas to experimental science is so valuable, that the relative cost bears no proportion to the advantages arising from its use. In this department the gas furnace of F. B. Krause, illustrated in AMERICAN GAS-LIGHT JOURNAL for April, 1860, page 212, will form a medium worthy of adoption in metallurgic operations. In shops, warehouses, stores, &c., gas stoves involve no additional premium on Insurance Policies, and under proper arrangements are not likely to exceed the cost of coal, when the time employed in lighting, attendance, waste, and reduction of risk is taken into account, and those conditions will be nearly the same whether in cooking, heating baths, rooms, cabinets, libraries, picture galleries, &c. where cleanliness and the absence of soot and dust is desirable. And here let me be understood that my remarks apply to gas as consumed in the Bunsen burner, or such modification of it as to mix the gases with their due proportion of air previous to, or at the point of ignition, so that both gases shall be burned simultaneously. I draw attention to this, as a project has been recommended, both in this country and France, of lighting coke fires by a series of burners fitted to a tube placed inside one of the grate bars; and I think it difficult to conceive a worse application of gas, for no sooner does the flame play upon the cold surface of the coke, than its temperature becomes reduced below the igniting point of carbon, and becomes deposited on the surface of the coke in the form of lamp-black, which forms, perhaps, the worst conductor of heat with which we are acquainted. Thus we have not only the first loss, but the results of that loss giving rise to a second. The best applications at present known to us may perhaps be susceptible of improvement, and the spirit of enlightened inquiry may adopt such means as will render the use of gas as a calorific agent profitable alike to the consumer and manufacturer of gas.

OBSERVATOR.

DALKEITH GAS-WORKS, SCOTLAND,
22d June, 1860.

A SCIENTIFIC REVIEWER REVIEWED.

WASHINGTON, D. C., July 14, 1860.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL:

A long review of my work on "the Manufacture of Photogenic or Hydrocarbon Oils" having appeared in the July number of Silliman's Journal over the name of Frank H. Storer, I beg leave, through the medium of your columns, to offer the following reclamation:

The work having been published in August, 1859, upon a subject interesting to the manufacturing community, and, as regards this country, involving a "new branch of industry"—a phrase obnoxious to the reviewer—might perhaps have claimed an earlier notice than after an interval of almost one year, especially when a protest so earnest and so lengthy was to be placed on file, unless the extended circulation of the review in sheets, *before the date of publication of the review*, might be considered an equivalent method of reaching those interested.

From the injustice of that review I appeal to those acquainted with the *status quo* of the art, and proceed to notice, seriatim, the objections and charges made by the reviewer.

One of the errors charged upon the author is his presumption in bringing out a special book upon the subject, with a classified index of patented applications. "Had this list been published by itself," says the critic, "or had it been incorporated with a portion of the materials which Dr. A. has now exhibited, in an article or short series of articles in some one of our scientific or technological magazines, it would have been most gratefully received, and we doubt not widely copied." The only answer to this advice is, that the author preferred to present his compilation to the public rather than render obeisance to the waning circulation of the only purely scientific journal in the U. S., and the sale of the work has justified his choice.

The work is charged as being defective, whether in "a close examination of general principles to be followed, or of special details to be observed." I am at a loss to understand how this charge could be made, except on the supposition that the critic had read no farther than the first chapter. On inspecting the work, it will be found that chapters 7 and 8 are devoted to the details of manufacture, with references to the transatlantic modes of operating, involving 40 pages of a book of 147 pages, or about one-third of the whole. With regard to the general principles, chapter 3 is devoted solely to these considerations; and elsewhere, under the description of the various substances submitted to destructive distillation, additional details are given. The reviewer finds fault with the term *tar* as too generally applied to the products of distillation of coal or bitumen, and recommends that the term crude-oil or coal-oil should be used therefor. Now, the term *tar* was originally applied to the heavy, dark oily fluid obtained from distilling organic bodies at high temperatures in closed vessels, which was so termed by Boyle, Holes, Dundonald, and all writers anterior to the manufacture of illuminating gas; and it has been so applied, without reference to the chemical constitution, by Turner, Gregory, Cane, and a host of other writers of the day. The word conveys no idea of the chemical constitution, which varies with the temperature, as known to every practical man, and alluded to on pages 56 and 57 of the work reviewed. The reviewer himself, on the fourth page of his critique, shows that Reichenbach used a synonymous term in its wide and ordinarily accepted sense. The critic is evidently confused between the generic term and its subordinates, as *coal tar* and *wood tar*, &c., and charges his own confusion on the work reviewed. The term *tar* does not necessarily presuppose distillation to produce gas merely; nor is *huile de schiste* of the French synonymous with *coal-oil*, as our reviewer would have it believed. It has a much wider signification, involving the products of distillation of all bituminous substances.

From the fourth to the nineteenth page of the critique, a dissertation occurs on the processes employed by Selligue and the products of manufacture, which would be more in place as "a communication to a scientific or technological journal" than as a review of this work.

Indeed, this middle portion of the critique hangs so loosely on the first and last portions as to suggest the idea of a double handed review, the joint production of a young chemist and a more mature patent solicitor, whose object was to break down some existing right by detailing at large the results of chemical manufacturers in continental Europe.

The *animus* which pervades this portion of the review is unworthy of a high-toned journal, as evidenced by taking the author's statement of his belief of the equity of the patent right of Young as the groundwork of a treatise on the prior inventions of Selligue and others, and under the garb of scientific and truthtelling criticism, specially approved by the editors of the American Journal of Science, placing before the public a statement which may be referred to, after a few years, as the disinterested opinion of men of science.

And it is a matter of grave consideration for writers to find the earliest and the only professedly pure scientific journal departing from its legitimate functions and prostituting its columns, for an object which, whether worthy or not, does not come within the true sphere of its duties. If any expression of opinion in relation to the value of Young's invention was uncalled for in my works, certainly the occupation of *fifteen* closely printed pages of Silliman's Journal with a description of a manufacture nearly thirty years in operation, forming fourteen-nineteenths of an essay to prove the antiquity of Young's patented invention, is deviating from the true functions of a "journal of science." The review might truly have been entitled, "Historic doubts concerning the invention of James Young;" but it would not then have served the future purpose indicated.

The author is also charged with not having informed himself of the works which appeared anterior to the date of publication of his work. In reply it may be stated that the greater portion of the manuscript was written in 1858, the same year in which two of the works referred to appeared, and was exhibited to the publisher in the spring of 1859. Before commencing to write on the subject the author made enquiry for all printed publications in Europe, but could learn of none, and therefore felt justified in making the statement in his preface that his was the first publication. If the review itself had appeared close upon the publication of the book, it is very doubtful that even the critic would have found them out.

The author is accused of doing injustice to Selligue, Reichenbach and others, by upholding the claims of Young to patentable novelty. Having had occasion, in the course of official duties, to devote special attention to the claims of English patentees of this manufacture, and having been compelled to wade through a large mass of literature, legal as well as technological, he trusts that, though he still adheres to his stated belief in the novelty of Young's invention, the readers of that critique will not endorse the critic's charge of presumption in writing upon a subject upon which he was not familiar; and the author will spare them the unpleasantness of retorting on the reviewer his neoteric intolerance. Had the reviewer entered a few years earlier on the study of chemistry, when the terms *coal* and *bitumen* were used in a widely distinct sense, and the substances were believed to have but little in common, he would then understand the difference—as understood fifteen or twenty years ago—between working on bituminous schists and on coal. At the present time every chemist recognises coal and bitumen as equivalents, *quoad* the bituminous portion present, and that the class of substances obtainable from the one is also obtainable from the other. But it was not so in 1830, in 1840, and but partially in 1850; and, in treating of the progress of an art, its advance should not be estimated by the knowledge of to-day, but by the standard information of that time. Applying this rule to the improvements asserted to be overlooked, the author has no hesitation in looking upon the inventions of Selligue and Young as distinct from each other, and upon the latter as somewhat in advance of the former.

From reading the review, one not acquainted with the work might suppose that the processes of Selligue were not noticed, nor even his name introduced; but the author has done him no injustice—has nowhere taken from him due credit. On p. 80, 1st edition of the work, it is stated that Selligue first introduced into France the manufacture of oils from bituminous schists; on p 81, 1st ed., that he applied this oil, before 1845, to lighting purposes, as a substitute for gas; on pp. 81, 82, 1st ed., detailed his process of manufacture; and on p. 16 alluded to his manufacture of paraffine as antecedent to and causing the extended production of that substance in England. Thus much for Selligue. As for the underestimation of Reichenbach, the charge savors of the ludicrous. On pages 11 and 12 of the work, the author credited Reichenbach with the discovery of paraffine; paid a merited compliment to his labors; showed the small amount of paraffine which he obtained from a

given amount of material, and stated that such was a commercial failure. On p. 14 he quoted Reichenbach's own language as alike a proof of failure and a tribute to Young. Notwithstanding this candid statement of Reichenbach, our critic insists that it was not a failure, and that Reichenbach's statement to that effect *was a mistake* on his part! Who is it, it may be asked, that commits an injustice on Reichenbach? Is it the author of the work, who has truthfully narrated the fact, or is it the reviewer, who, in his haste to condemn, finds it necessary to give the lie to cotemporaries and eye-witnesses of a fact?

To a fair, even though unfavorable review, the author would silently submit; but he does protest earnestly against the style of reviewing of which this is a sample: composed of sweeping denunciations in the foreground, without any backing up of facts—charges made of errors of omission and commission not proven—of inaccuracies not pointed out, these forming a shell inclosing a nucleus of a very different growth—a nucleus of garbled extracts from the *London Gas-Light Journal*. Has the critic been studying patent law and Lord Chancellors' decisions as well as processes in arts? or has he not rather lent himself to be made the tool of some designing head, whose mask he is? His quotation, on the last page of his review, of the decision of Lord Campbell, in juxta-position with a statement of the author, may seem, in his opinion, satisfactorily conclusive and demolishing; but far otherwise does it appear to those used to discriminate the meaning of words, or the uncertainty that belongs even to the expressions which fall from the lips of a judge. The Chief Justice said, "if *this mode* of obtaining paraffine and paraffine oil had been described in books previously," &c., &c. Was the mode described? Lord Campbell *did not say it was;* he placed it as a question of *fact* for the jury to decide, cautiously abstaining from expressing his own opinion; and the jury *found for Young*, leaving thereby, on record, their opinion that *Young's mode had not been previously described.*

Manifestly here the reviewer either does not discern the difference between a judicial charge and a decision, or, to fling back his own expression, he is guilty of a quibble to sustain his position.

But why this studied contrast of the opinion of an official in the U. S. Patent Office with the charge of a high legal functionary of England? Is pure science degraded or the manufacture of oil endangered by a statement of the author? Is the article in Silliman's Journal a calm and philosophic review of a small and unpretending sketch of a manufacture new to America, or is it the data and the basis upon which a question in future may be raised as to the propriety of an extension of the now almost expired patent of Young?

That some errors of the press, and minor inaccuracies, have crept in the author is free to admit. When the proofs were forwarded to him for correction he was precluded, by serious illness, from personally revising them; and hence, among other errata, false spelling in the names of chemical substances was retained. The omission of the names of Du Buisson and Michiels from the list of patentees was an oversight; the existence of the patents was known, and the neglect to acknowledge may be *charitably* excused. In the language of the reviewer, "he must have been in possession of most of the facts which will here be brought forward."

THOMAS ANTISELL.

NORTH ADAMS, MASS.—A meeting of the citizens of North Adams interested in the establishment of gas works, has been held, and correspondence ensued with various parties in reference to the erection of the necessary works, and one gentleman from Springfield has carefully looked over the ground. It is believed that the buildings, retorts and apparatus can be furnished for less than $20,000, and that a large part of the stock will be taken by the parties doing the work. There can be no possible question of the profitableness of a gas-light enterprise in the place.

HARTFORD, CT., WATER PROJECT.—The Water Commissioners and the Committee from the Common Council, accompanied by Mr. Swift, a hydraulic engineer of New Jersey, and Mr. Stanley, the projector of the New Britain Water Works, recently visited West Hartford to look at the stream and reservoir location recommended as the best for obtaining the needed additional supply of water for the city. Chemical analysis shows it to be as pure as the river water; the soil is a clean gravel, which, when overflowed by the water of the reservoir (if one is built here,) will not encourage the growth of vegetation and injure thereby the healthful qualities of the water.

The Commissioners proved by actual measurement that the quantity of water running through this stream was at the rate of 3,000 gallons per day. This excellent project is dead for the present. After a long an earnest debate in the Board of Aldermen, the vote authorizing the Water Commissioners to go forward in the prosecution of the work, was rejected by a vote of seven to four. The city will know who is to blame if a destructive conflagration sweeps the fairest portion of the town for want of a sufficient quantity of water. Some part at least, of the determined opposition to the measure seem to have been dictated by motives of personal pique, or personal envy—motives entirely unworthy men whose sworn duty is to act for the interests of the whole city, whether certain persons reap the larger benefit or not.—*Hartford Times.*

BROOKLYN, N. Y.—This company has reduced the price of gas to $2.50, in view of the the tariff established by the Citizens' (Opposition) Company, whose works are rapidly progressing.

CORRESPONDENCE.

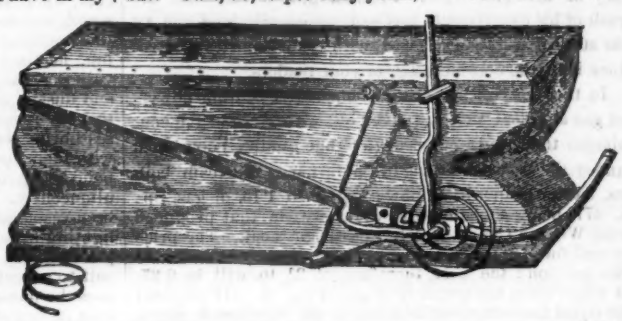
HISTORY OF THE DRY GAS-METER.

111 EAST EIGHTEENTH STREET,
NEW YORK, JUNE 20th, 1860.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL:

As thirty years have nearly elapsed since early experiments on the *dry gas meter* were instituted, it has been suggested that the history of this important measurer of gas be written. It may be asked, where are the materials? who is to do the work, and to whom will the benefits accrue? In reply, I may state that I have in my possession, and can procure all the needful materials—the gas meter makers will have before them a valuable and correct state of facts—there are parties capable and ready to undertake the work. The necessary funds for getting up the book in a creditable manner should be paid by the meter-makers, as it is well known that not one of the trade in the United States ever paid a single dollar to the originators of the dry gas meter, and the most of them (there are some honorable exceptions) seldom even condescend to name the originators!

The annexed woodcut illustrates the *first attempt at dry gas-meter making.* It will be readily understood to consist of a double-headed bellows contrivance, fitted up with a four-way cock; the coiled spring in its action on the plug of the cock, by its tension and bent levers, gave direction and measurement to the gas, as it passed to and from each compartment to the burners. It is needless to add that the performance of this machine was one of much unsteadiness of character to the burning jet of gas, yet, it gave promise of better things, and furnished important aid to the better understanding of the meter generally.



I purposely omit mentioning names in this communication, trusting that an editorial from you will give an impulse in the right direction, and "honor to whom honor be due." I am, sir, respectfully yours, JOHN JOHNSON.

PERPETUAL ICE.

AUSTERLITZ, COLUMBIA CO., N. Y.,
July 9, 1860.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL:

In relation to the frozen well on my premises, the ice formed in the early part of the spring, in large quantities, on the stones at the sides of the well, extending upward from the surface of the water some three or four feet; it gradually wore away, and on the last day of May disappeared, at which time the water was at a temperature of 34°, and is now very cold. Last year, at this time, it was very warm. The well has been dug for several years and nothing of the kind has occurred before, except, in the very coldest weather, a slight freezing over.

The well is about 20 feet deep, and had 9 feet of water at the time the ice disappeared. Soil gravelly, with occasional beds of clay. In addition to the accumulation of the ice on the sides of the well, it froze over so hard that it had to be broken with a heavy iron, and large balls of ice floated on the surface after the middle of May, nearly the size of half a bushel.

Yours truly, ABIJAH HEATH.

COMPRESSION OF GAS.

To the Editor of the AMERICAN GAS-LIGHT JOURNAL:

It is known to most of your readers that, from the first introduction of gas for illumination, efforts have been made to compress it and put it in a portable shape, so that vessels, or houses distant from places of supply, might have the advantage of gas-light.

While so much has been accomplished, no considerable use has been made of it, for the reason that the pressure is constantly reducing as the gas is consumed, consequently the regulation has been impossible, without frequent turning of the faucets.

The *Regulator* of the New York Car and Steamboat Gas Co. fully answers the purpose so long desired, and an instance of the perfect success of the arrangement occurred at Sing Sing on the 29th June.

A gentleman had built a splendid house, beyond the reach of the gas company's mains, and had furnished all the pipes and appliances for gas, but was still without gas.

Having invited a large company to meet at his house on the evening named, he made an arrangement with this company for light, and I sent him from this city twelve cylinders, each about 6 feet long and 13 inches diameter, containing a little over 1,200 cubic feet of gas. The gas was lighted at half-past eight, and burned until a quarter before two—making over five hours, and full 40 burners.

Ordinarily the consumption would not have less than 800 feet, but such is the perfection with which the Regulator controls the supply, that the lights were full, and the consumption not over 500 feet.

The proprietor was naturally very anxious about its operation, but the result was equal to the most sanguine expectations, and was a perfect success.

You may calculate confidently, before long, to have gas-lights in all your night travels, either by railroad or steamboat. CHARLES STARR,

NEW-YORK, July 7, 1860. 117 Fulton street.

CHARGE OF STEALING GAS.—A publican, but, as it turned out, not a sinner, named John Green Astropp, was tried in the Middlesex Sessions, London, on 6th June, for stealing 10,000 feet of gas from the Imperial Gas-Light and Coke Company. The prisoner burned gas by a 10-light meter, and had complained of some deficiency of light through some defect in the meter, and had put in water more than was requisite, after which he, it was charged, disconnected the meter, and connected the supply and service-pipe with a bladder, and enjoyed the gas *ad libitum* for seven weeks. The principal witness against the prisoner was shown to be a harder subject than the prisoner himself, so the jury found him not guilty.

NOTICE.

THE ROOMS OF

THE AMERICAN GAS-LIGHT JOURNAL

ARE

OPEN AND FREE TO ALL.

Strangers and Citizens are invited to call and make themselves quite at home, at all times.

THE GAS QUESTION AT CLEVELAND, O.

The Committee on Gas, in their Report to the City Council on Tuesday evening, submitted the following communication on the subject from the Cleveland Gas-Light and Coke Company:

OFFICE OF THE CLEVELAND GAS LIGHT AND COKE CO., CLEVELAND, June 11, 1860.

Messrs. Dixon, Christian and Lewis, Committee of Council of the City of Cleveland:

GENTLEMEN.—The Board of Directors of the Cleveland Gas-Light and Coke Company, have considered the proposition made by the Honorable Council, through you, their respected Committee, viz.: First—To contract with us for the supply of gas to the street lamps for one year, at $15 per lamp per annum. Second—For the supply of gas to the city for the same time, as may be wanted for city purposes, by meter, at $1 50 per 1000 feet. Third—To furnish gas to the citizens generally at $2 25 per thousand feet. And Fourth—That, in case of our refusal so to contract, the same terms will be offered to any responsible party who will undertake to comply with them.

In reply first to these proposals generally, we desire to state, with all due respect to the Honorable Council, that the terms on which our Company was organized, and our property to a large amount has been expended, were permanently fixed by the Ordinance of March 9, 1849, and though the price of gas for use by the city for lighting the streets and otherwise, is a proper subject for contract from time to time, in conformity with this Ordinance, we do not recognize any right on the part of the Council subsequently to legislate as to the prices at which we shall sell gas to private consumers.

Our last contract for lighting the street lamps was made in April, 1855, for a period of five years, by which we were to charge $17 50 per annum for each lamp, including the lighting, extinguishing, cleaning, care, and ordinary repairs of the same; each lamp to consume four feet per hour, and to burn 2200 hours per annum, in accordance with the astronomical tables prepared for lighting the streets of Cincinnati; and if it should be found necessary to increase the amount of gas consumed by each lamp, (as was contemplated, and is really necessary with lamps at so great distance apart,) the price was to be increased *pro rata*. This contract was based upon the ordinance before referred to, which provides that gas shall be furnished to the street lamps at a price not exceeding that paid for the same either in Buffalo or Cincinnati. And though the price charged in the former city, with double the amount of private consumers and nearly five times the number of street lamps, is more than 60 per cent. greater, yet in the latter, where the cost of coal is 37 per cent. less than ours, and the number of private consumers and of street lamps is more than four times as large, the price was then, and *still is*, $17 50 per lamp burning 2200 hours, and four feet per hour; and our contract was therefore made at the same rate, and has been fulfilled at an actual loss to us of more than $2 per lamp per annum, $3,500 in the aggregate during the term of the contract. The necessary cost of labor *alone*, in lighting, cleaning, &c., without the

cost of burners, repairing &c., with our present number of lamps, is $2 94 per lamp; and in eight other cities, the only ones of which we have been able to learn that are lighted by contract, the average price paid for the same service is $4 12½ per lamp per annum. This leaves us but $14,56, and a proper estimate of the cost of repairs burners, &c., would farther reduce it at least below $14 per lamp, or $1 59 per thousand feet for the gas. We have been at some pains to ascertain the cost of lighting other cities in comparison with ours and have given the results in the accompanying table marked "No. 1," to which we beg leave to refer, having been unable to find any one (except Pittsburgh and Alleghany, where the sales of coke amount to more than the purchases of coal.) in which the cost of lighting is less than in Cleveland; and in 78 towns and cities reported, embracing all the larger cities, in some of which the number of consumers is more than 20 times as large as ours, the average price when brought to the same standard as ours, viz—8800 feet per annum, is $23 50 per lamp per annum, or $2 76 per thousand feet for the gas alone, which is furnished under our late contract at $1 59.

Under these circumstances, understanding the proposition to include the lighting extinguishing, care, cleaning and ordinary repairs, and the consumption of gas the same as at present, we would not be willing to contract for the lighting of the street lamps at any less than the present rates, and we think the Council will see that it is not reasonable to ask us to do so.

In reference to the second item of the proposition, we need only say, in a word, that the supply of gas to the city by meter has been made under our last contract at $1 75 per thousand feet, which is less than the average cost to us, and no higher than is paid by any city in the United States, so far as we learn, except Pittsburg. And though the amount thus consumed is comparatively small, we fail to see any good reason for a further deduction.

The price of gas to private consumers was limited by the Ordinance before referred to, to $3 per thousand feet, and it has been sold at that price *from the commencement*. In the early history of the Company, this price was not remunerative so greatly does the cost of production and distribution depend upon the amount furnished; and the enterprise was deemed so hazardous that it was with much difficulty that men were found who were willing to pledge a sufficient amount of capital to undertake it, and for a long time transfers of the stock were made at great sacrifices from the amount paid in. And up to the present time the highest premium at which any sale of the stock has been made has been 10 per cent. advance on its par value, which represented only the amount actually invested in cash; and large transfers have been made during the four years at this and lesser rates.

Many false and extravagant statements have recently been made relative to the amount of our profits, dividends, the cost of gas, &c., which we have not deemed it necessary or proper to follow up and contradict, on account of their manifest absurdity, as well as esteeming our business to be as legitimately our own, and the knowledge of its results as properly limited to our own stockholders, as that of any other manufacturing company. Inasmuch, however, as these statements may have influenced the Council to some extent, it may be proper for us to say to them, that our average dividends of profits paid in cash to the stockholders, aside from the amount expended in the enlargement of our works, have been less than 10 per cent. per annum, and while a great portion of our property is perishable, no sinking fund has been provided for its depreciation. And the actual and necessary cost of our gas, which we are situated to make as cheaply and distribute as economically as any other party, has been considerably in excess of the amount paid for it by the city for its public use. The length of our mains in proportion to the number of our consumers and street lamps, is unusually large—23 miles to 1700 consumers and 465 lamps—owing to the extended condition of our city, and the liberal policy of the company, which has increased every year as we have been able, in extending pipes on leading streets necessary to be lighted, though not at present remunerative in the amount of gas consumed, and we have now on the ground more than two miles of pipe which we propose to lay on similar streets during the present season. Our last contract with the city binds us to lay 4000 feet of main pipe per annum, if the Council shall require, and furnish sufficient encouragement in the number of customers. Since the date of which the amount laid has exceeded ten miles, or 10,590 feet per annum, in most cases without such encouragement, and the Council have deemed any suggestions unnecessary. The proper criterion by which the public should judge of the price they pay for our products is the same as in reference to any other manufactures, by comparison with that charged by other companies taking into account whatever circumstances necessarily influence or modify their comparative cost. The accompanying table marked "No. 2," has been compiled from reports of the companies in 248 cities and towns in the United States embracing nearly or quite all of those now lighted with coal gas, as published in the AMERICAN GAS-LIGHT JOURNAL of January 2. 1860. From this it appears that in only eight of the 248, the price charged to private consumers at present is less than it has always hitherto been in Cleveland. In two of these eight, Pittsburgh and Philadelphia, the works are owned by the cities, and the design is to furnish gas at the actual cost, which in Pittsburgh, where the cost of coal is less than nothing (owing to the comparative value of coal and coke) is $1 60, and in Philadelphia where the number of consumers is 37,000, and of lamps 6,000, it is $2 25, which is the next lowest price in the United States. The remaining six are New York and other large cities, in which the number of consumers ranges from 2,000 to 40,000, and the price from $2 50 to $2 75 per 1000 feet, and the average price charged in these 248 cities and towns is $3 88 per 1000 feet. From a thorough and candid examination of these statistics, with all the facts we can gather in connexion we are satisfied that no company in the United States is furnishing gas to its customers at a less price in proportion to the number of its consumers, and other circumstances necessarily influencing the cost of its production and its distribution, than our present rate, and we are equally confident that a similar candid examination by an unprejudiced party would lead to the same conclusion. As a question of policy, however, at the last semi-annual meeting of this Board in January last, the reduction of the price of gas to private customers was discussed, and it was then decided to make a discount of ten per cent. from all bills of gas consumed from and after July next, and which should be paid at the office of the Gas Company during the first five days of each succeeding month. This will bring the net price to $2 70 per thousand feet, which is decidedly less than and other city in the United States, in proportion to its necessary cost, and as low as we can afford to make it with our present number of customers.

The peculiar nature of the business of Gas Companies, so large an amount of their expenditure being in the facilities for the manufacture and the means for the distribution of their product, is such, that it is common to give them the exclusive use of the streets for that purpose, before they are willing to make such an expenditure, though this company has never sought such a privilege; and there is no instance in this country, and it is confidently stated there are none in Europe, where two companies have occupied the same territory for any considerable length of time, the attempt to establish a rival company having uniformly resulted disastrously to both, and ultimately to the citizens generally. Should such an one be organized here, it could hardly result otherwise than in the sacrifice of property by both—in proportion to the magnitude of the new enterprise—and the abandonment of the field by the one or the other. Whether, in view of the additional fact that many of our streets are fully occupied with water and gas pipes, and large additions to such occupancy are contemplated in the way of sewerage, street railroads, &c., there is sufficient reason for the additional annoyance involved in the extensive digging necessary to the laying of main and service pipes by a new gas company thoughout the entire city, as well as the sacrifice of property before referred to, is a question which it is of course the province of the Council in their wisdom to decide.

Thus, gentlemen, we have endeavored to reply to the several points of your proposition in the order in which they are presented, and in conclusion we may be allowed to say, that we doubt not the resolutions of the Council have been made under a misapprehension, which we trust the simple statement of facts herein set forth will suffice to correct. If, however, our statement should fail to convince the Council that the interests of the city in its corporate capacity, or of the city individually not only do *not require*, but would not be *promoted* by the organization of a rival gas company, it only remains for us to request, as a matter of simple justice, that such company, if granted the use of the streets, should be placed as nearly as may be on an equal footing with ours, by requiring them to construct works of a similar capacity, and to lay an equal extent of main pipe; and that the contract for lighting any portion of the street lamps be not transferred to them until they are able to light the whole number of lamps in use at the time of such transfer, as it certainly would not be reasonable to ask us to light the distant and scattered parts of the city, either as to the street lamps or the private citizens, while the more central, compact and profitable portions were taken from us—and this being done we will abide the result.

By order of the Board of Directors.

T. DWIGHT EELS, *Secretary*.

TABLE NO. I.—Comparative price of Gas to Street Lamps, &c. First four neighboring cities obtained in detail by correspondence.

	Private Consumers.		Street Lamps.		Public b'ldings	Cost of Coal.
	No.	Price.	No.	Price.	Price.	
Cincinnati*	6,833	2 50	1,819	1 70	2 00	2 66
Buffalo	3,500	3 00	2,050	2 67	2 50	4 30
Columbus, O.	878	3 00	193	1 82	2 00	4 25
Chicago	4,300	2 50	1,303	2 00	2 00	3 75
Cleveland	1,700	3 00	462	1 59	1 75	3 05

* Five per cent. discount on bills paid at the office in five days.

Price of Gas alone to Street Lamps in 78 other towns and cities, compiled from recent tables:

1	Pittsburgh	$ 90
1	Alleghany	1 48½
1		1 75
4		1 83
14		2 00
1		2 15
1		2 20
4		2 27
3		2 40
10		2 50
1		2 64
10		2 75
11		3 00
1		3 10
1		3 12
1		3 25
2		3 40
4		3 50
5		4 00
1		4 20
78	Average	2 76

TABLE NO. II.—248 Cities and Towns in the United States—Comparative Price of Gas to private Consumers.

Number of Towns and Cities.	Price.	Numbers of Consumers.	
1	1 50	2,650	Pittsburg—Works owned by the city—Coke sells for more than the Coal costs.
1	2 25	37,000	Philadelphia—Works owned by the city.
5	2 50	4,300	Chicago.
		6,800	Cincinnati.
		8 800	Baltimore.
		12,000	Boston.
		40,000	New York.
1	2 70	2,900	Louisville.
21	2 00		
1	3 10		
4	3 25		
56	3 60		
9	3 60		
3	3 75		
15	3 80		
97	4 00		
11	4 50		
1	4 75		
9	5 00		
3	6 00		
248	3 88	average.	Several Rosin Gas Works with prices from $6 to $8 not included.

A BURST AT THE SPRING GARDEN WATER WORKS, PHILADELPHIA.—About ten o'clock on Friday night, June 29, it was discovered that one of the thirty-inch mains used to supply the reservoir from the Spring Garden Water Works, had sprung a leak. The break was a bad one, but it was repaired during the night, without any damage to the works or interference with the supply of water.

PHOTOGRAPHY.—The French *savans* are applying photography to physical astronomy and the mathematical measurement of the heavenly bodies. "Proots" of the sun's disc, presented to the academy lately, give the exact co-ordinates of the spots on the sun, the elements of rotation, and the circumstances attending the passage of the inferior planets across the solar disc. An image of the sun on the meridian, taken ten months before, was also presented. It was some years ago proved by experiments in this country, that the same method can be applied to observation of the planets and stars, a moveable plate being made to follow the motion of the heavenly body until a photographic impression is obtained.

LOUISVILLE, KY.—This Company declared its usual semi-annual dividend of 6 per cent. on 2d instant, and decided to reduce the price of gas to $2 50 per 1000 feet on 1st August. This Company made during the last six months, from January 1 to July 1, 27,536,700 cubic feet of gas, of which they sold to private consumers 21,898,200 feet. They have now 41 miles, 4341 feet street mains, and 1089 public lamps.

YREKA, CAL.—A wood gas company. Use soap-stone retorts; have 3000 feet of mains. The population is small and scattered, but the company is prospering.

MARYSVILLE, CAL.—These works, as well as those of Yreka, were built by Mr. D. E. Knight. They pay $32 per ton for Australian and Chilian coal, and charge $12.50 per 1000 feet for gas. They have 2½ miles of 3 and 4-inch mains laid. Iron retorts, from Union Iron Works, San Francisco, and meters from Dobzinskey's factory, in same place. We wish these laudable enterprises all prosperity; they deserve it.

ELLICOTT'S MILLS, MD.—A charter has been obtained for a gas company at this place, and all that is needed is for a substantial contractor to go there and put up the works.

FAIRFIELD, CONN.—A rather sparsely-settled village, and the inhabitants perhaps too practical to use gas, though they did pack up their crockery when the comet of 1830 or 32 was expected. It would do no hurt to visit the pretty village at this season, and a contract might grow out of it.

The Fairfield Hotel manufactures its own gas, with Butler's Portable Apparatus.

SOUTHPORT, CONN.—Ditto to the above all through. Whatever takes place in Fairfield, reaches Southport by the next train; let Fairfield make the start.

XENIA, O.—This company consists of five members, incorporated under the general manufacturing laws of that State. Use Pittsburg coal at 18 cents per measured bushel; have 13,000 feet of mains from 1½ to 4 inches diameter; purify with dry lime, and as soon as they use a photometer, a gas thermometer, and read up the latest works on gas making, they will begin to make dividends.

HARLEM, N. Y.—Mr. Samuel R. Brick has just laid out the additions to these works consisting of an addition to the Retort House, 82 by 58 feet, to hold 100 new retorts; a Purifying and Scrubber House, 52 by 100 feet; a Gas-Holder, 90 feet in diameter by 52 feet high; a Meter House and new meter to register 1,250,000 cubic feet per day; and four thousand feet 20-inch mains.

SAUGERTIES, N. Y.—Works about being built by G. T. Sutton.

PORT CHESTER, N. Y. Do. Do.

PATENTS.

Inventors are informed that Patents are procured at the Rooms of the AMERICAN GAS-LIGHT JOURNAL, through F. C. TREADWELL, Jr., Esq., an experienced Patent Agent and Expert.

UNITED STATES.

28,663.—Samuel Frazer, of Galena, Ill., for an Improvement in the Distillation of Oil from Resin :

I claim the mode of obtaining oils from resin by distillation, as set forth, by the distillation of resin at the temperatures and in the manner set forth.

28,666.—E. J. Hale, of Foxcroft, Maine, for an Improvement in Lamps :

I claim the arrangement and application of the stationary spring catch or wick retainer, C, relatively to the lamp cap, A, and the wick t be, B, made adjustable vertically by means substantially as described.

And I also claim the combination of the rack plate, g, with the adjustable wick tube, B, and the spring catch, C—the same being for the purpose as specified.

28,674.—Alfred Johnson, of Philadelphia, Pa., for an Improvement in Hydrants :

I claim the diaphragm, E, when arranged in the described connection for the purposes set forth.

28,683.—Charles Miller, of St. Louis, Mo., for an Improvement in Lamps :

I claim the combination of a cooler with the regulators as herein described.

28,691.—C. W. Richter, Madison, Ga., for an Improvement in Vapor Lamps :

I claim, first, The arrangement of the air pipes, a a D, and draft tube, C, as and for the purpose shown and described.

Second, The employment of the cork layer, F, in combination with the cylinders, E C, and tubes, a a D, as shown, for the purpose specified.

Third, the lining of cork, h, or other suitable non-conducting substance, placed in the upper part of the wick tube, G, in connection with the cork or other non-conducting substance, k, attached to the under side of the button, j, of tube, I ; k and i being arranged relatively with the top of the wick, A, to operate as and for the purpose specified.

[The object of this invention is to obtain a lamp for burning the heavier grades of coal oil with a good illuminating flame. The invention consists in a novel means employed for adjusting or raising and lowering the wick within the wick tube, so that the wick is allowed to remain loose and free from pressure within the tube, thereby favoring the capillary ascent of the viscid oil, and insuring a proper supply of the same to the flame.]

28,692.—Eben Savey, of Boston, Mass., for an Improved Fire Brick :

I claim my improved fire-brick lining, as made with ribs and air channels, or ducts combined or arranged relatively to each other, substantially as specified.

28,694.—George Smith, of Macon, Ga., for an Improved Hose Pipe :

I claim the hose pipe described, when made in such a way that several nozzles or short sections of pipe are made to be coupled together and secured by means substantially as set forth, for the purpose described.

28,695.—Oliver Snow and H. S. Snow, of West Meriden, Conn., for an Improvement in Lamps :

We claim the method of securing the chimney in its position for use, by means of springs attached to the deflector operating on the inside of the chimney so that no outside circle points on other holders are needed, when the whole is constructed and fitted for use substantially as described.

28,704.—Edward Wade of Norwich, Conn., for an Improvement in Pumps :

I claim the arrangement and combination of the horizontally rotating cam disk, A, rising and falling yoke. F, and series of lazy-tongs, G, constructed and operating substantially in the manner and for purpose specified.

[This invention consists in the arrangement of a horizontally rotating cam disk, in combination with a rising and falling yoke and with a series of lazy tongs, in such a manner that, by rotating the disk, a rapid reciprocating motion is imparted to a pump piston or other part of a machine attached to the extreme end of the lazy-tongs.]

28,717.—J C. Jennison and Augustus Hale, (assignors to E. J. Hale and Augustus Hale,) of Foxcroft, Maine, for an Improvement in Lamps :

We claim the arrangement and application of the spring clasp and its angular notches to the chimney carrier, so as to enable the clasp to be turned upward from and to operate with the notches and confine the chimney in place in the carrier, substantially as described.

We also claim the improved chimney carrier, as made to embrace and close down upon and connect to, the lamp cap, and be separate from the deflector, and to have a shell or flanch for supporting the chimney arranged upon it, essentially as specified.

28,722.—S. H. Whitaker, (assignor to himself and Wm. L. Thomas,) of Cincinnati, Ohio, for an Improvement in Gas Regulators :

I claim, first, In the described connection with receiving and discharging chambers, A and B, and a stationary seat, F, supported on a stem which passes through the diaphragm, the valved diaphragm, D E, or its equivalent, operated by the unequal pressures, on its opposite sides, of the entering and escaping gas, substantially as set forth.

Third, The nut, H, rod, G, and seat, F, in the described combination with the valve, E, for the purpose of adjusting the capacity of the apparatus from the exterior.

28,720.—Levi Short (assignor to himself and C. S. Pierce,) of Buffalo, N. Y., for an Improvement in Apparatuses for the Manufacture of Illuminating Gas :

I claim, first, A gas furnace, D, constructed and operated substantially as described, in combination with the retort, C, and retort house, B, for the purposes set forth.

Second, I claim the relative arrangement of the oil reservoir, A, retort house, B, (including the retort and furnace,) purifier, L, and gasometer, N, substantially as described, for the purpose set forth.

28,749.—E. J Hale, of Foxcroft, Maine, for an Improvement in Lamps :

I claim my improved wick retainer, as made, not only with a spring clasp by which it may be readily attached to, or detached from, the cap, as described, but so as to extend up through the lower end of, and into, the wick tube and against the wick, essentially as specified.

28,750.—J. P. Hayes, of Philadelphia, Pa., for an Improvement in Making Plumbers' Joints :

I claim a mold or case provided with a secondary chamber, f, to operate substantially in the manner and for the purpose set forth and described.

I also claim, in combination with a mold or case adapted for making plumbers' joints in pipes by the process of melting the ends of the said pipes, as described, the employment of a tubular protector, C, and for the purpose specified.

28,761.—James McGlensy, of Philadelphia, Pa., for an Improvement in Gas-burners :

I claim the arrangement of the cover, D, provided with holes in the top to spread the flame, with the tube, B, the jet A, and the holes, C C, when used in the manner and for the purpose set forth.

28,762.—R. S. Merrill, of Lynn, Mass., for an Improved Coal-Oil Lamp :

I claim the adaptation to the said wick tube, and arranged in a plain parallel with, and at a suitable distance from, its border, of one or more flanges, constructed substantially as described, to operate in the manner and for the purposes set forth.

28,781.—W. F. Shaw, of Boston, Mass., for an Improved Apparatus for Broiling or Roasting by Gas :

I claim the arrangement of the steak-holder, the boiling chamber and the burner or burners.

Also, the arrangement of the two deflectors with the heating chamber and with respect to the burner or burners and the steak-holder, when arranged as specified.

Also, the combination of the closed air chamber or space in the cover with the steak-holder and the heating chamber, arranged as specified.

Also, the combination of the vertical side or cover with the steak-holder and drip pan, said side or cover having a closed air-chamber or space as specified and shown in the drawings.

28,826.—Caleb Bond, of Richmond, Ind., for an Improvement in Water Wheels :

In combination with the passages, g, I claim the hinged auxiliary buckets, h, the whole being constructed and arranged to operate, substantially in the manner as specified, for the purposes described.

28,832.—John Champlin, of East Middlebury, Vt., for an Improvement in Water-elevators :

I claim, first, The buckets, F, one or more attached to the pulleys, C C', of shafts, B, in connection with the tilting shoes, E, through the medium of the links and rims, j i, or their equivalents, and the pawls arranged relatively with the ratchet, a, as and for the purpose set forth.

Second, The ball, I, and box, H, on shaft, G in connection with the pawls, b b', attached to the inner side of the curb, A, the shaft being connected to the shoes, E, through the medium of the links and arms, j i, or their equivalents, and the pawls arranged relatively with the ratchet, a, as and for the purpose set forth.

Third, The adjustable spout, L, arranged in connection with the slide, M, and tilting shoes, E, and adjusted respectively within and to the curb, substantially as and for the purpose set forth.

28,853.—Thomas Grundy, of Boston, Mass., for an Improvement in Water closets :

I claim the arrangement of devices described, the same consisting of the piston valve, k, playing up and down in the cylinder, j, and operated substantially as and for the purpose specified.

RE-ISSUES.

Wm. S. Carr, of New York City, for an Improvement in Water-closet. Patented Aug. 5, 1856 :

I claim, first, A cylindrical plunger or plug, 3, substantially as specified, acting to close the water passage, 2, at the time the water closet seat is depressed irrespective of the weight on the seat, as distinguished from a valve which requires compression to a given point before closing, as set forth.

Second, I claim the valve, g, cylinder, 3, and openings, x, in combination with the seat, v, and acting in the manner and for the purpose set forth.

Third, I claim, in a valve for water-closets, a cup leather for controlling the motion of said valve in closing gradually, substantially as specified ; said cup leather moving freely in one direction and closing against the containing cylinder in the other direction, and the leakage of water in said cylinder allowing the movement of said cup leather, as set forth.

Fourth, I claim the lever, p, acted on by the seat and simultaneously controlling the movements of the pan, r, and valve or cock for admitting water, as specified.

Fifth, I claim the combination of the lever, p, latch, t, and valve spindle, g h, as described, for regulating the movements of the pan, r, as set forth.

Sixth, I claim the valve for admitting water to the closet, in combination with the trunk or hopper, when said valve is connected directly to the said hopper, for the purpose and as set forth.

Seventh, I claim, in a water-closet in which the cock is attached to the hopper, a hollow arm, o, or opening into said hopper, substantially as specified, for conveying leakage from said cock into the hopper, as set forth.

John Wyberd, of New York City, for an Improved Night-light Reflector. Patented April 10, 1860 :

I claim the arrangement of a series of reflecting surfaces in an arch or dome form, over gas burners, so as to permit a current of air through the reflector and strongly illuminate objects below the light.

CODE, HOPPER & GRATZ,

1500, 1502 and 1504 FILBERT-ST., PHILADELPHIA.

MANUFACTURERS OF

Pressure Registers, Pressure Indicators, Pressure Gauges, Photometers, Governors, Station Meters, Customer Meters, (Wet and Dry,) Experimental Meters, (Wet and Dry,) Show Meters, (Wet and Dry,) Meter Provers, Centre Seals, &c.

The high reputation which we have enjoyed for more than twenty-two years, and the fact that we have manufactured a greater number of Gas-Meters than all other manufacturers in this country combined, must present itself as a security to parties desirous of securing the most reliable instruments. Having completed a most extensive addition to our Factory, and added many important improvements to our machinery, we are enabled to fill orders entrusted to us with dispatch, and in all cases *Guarantee Entire Satisfaction*. Our Patent Rotary-Valve Dry Gas-Meter is now used by upwards of Two Hundred Gas Companies, giving general satisfaction ; we therefore recommend it, believing it superior to any other Dry Gas-Meter manufactured. All Meters tested separately by a sworn Meter-Inspector, and sealed when desired.

ENAMEL DIALS FOR GAS AND WATER METERS.
BOTTOMLEY & HINES, MANUFACTURERS, West Philadelphia, Pa.

The best, therefore the cheapest for Gas and Water Meters and Engineers' Indicators.

These Dials are particularly adapted to all purposes where gas, gas-vapors, or acids, are present. Also, Watch and Clock Dials of every description, from any size up to 14 inches diameter.

The undersigned embrace this opportunity of returning their thanks to the gas-meter manufacturers throughout the United States, for the very liberal patronage they have received for the past ten years, during which they have been established in Philadelphia, which has placed us ahead of all competition. Our sales for the past year have been far greater than we could have anticipated, with the prospects of a steady increase. Our constant aim has been, and will be, to adopt all improved processes of manufacture, combining improvements in quality with reduction in price. All Dials made by us are warranted to be as represented, and of the best materials and workmanship, which will recommend them to all parties wishing the very best. Circulars sent free by mail, or on application

We are the appointed agents for HUNTER, SHEARMAN & CO.'S make of BRASS PINION-WIRE for Gas-meters, which we believe is equal to the best.

PORTABLE GAS WORKS.—S. T. McDOUGALL'S PATENT Portable Gas Works, for making Gas from Rosin, Rosin Oil, Coal Oil, Naptha, Grease, etc. These Works combine the latest improvements in gas making, and are guaranteed to be superior to any in market. They are made of all sizes, suitable for either country or city use. No county house is complete without its Gas Works. Gas Stoves of every description on hand and made to order. For sale by S. T. McDougall, 170 Canter Street, New York.

Agents wanted in other cities to sell rights or machines.

SCIENTIFIC BOOKS.—D. APPLEton & Co., 443 and 445 Broadway, have just published a Catalogue of their large assortment of Books (English and American) in every department of Science and Art, embracing a valuable collection of works on Geology, Chemistry, Mechanics, Engineering, the Naval and Military Sciences, and on Steam, Steam Engines, and Steam Navigation, etc., etc., etc., with the dates and prices of each work affixed.

Catalogues remitted to any address on receipt of six cents in P. O. stamps.

OFFICE OF THE WATER COMmissioners, Jersey City, N. J., July 10, 1860.—Notice to Coal Dealers.—Sealed proposals will be received at the office of the Water Commissioners until Tuesday, July 17, until 3½ o'clock, P. M., for furnishing and delivering on the dock of the Water Works, situated on the Passaic River, opposite the village of Belleville, twelve hundred (1,200) tons of bituminous coal. The coal to be the "run of mines," free from slate and earthy material, from the mines of the American Coal Company, or equal in quality to such coal, and to be delivered in good order as above, between August 1 and September 15, 1860. Parties proposing will state the price per ton of 2,240 lbs., and if other than the American Coal Company is intended, will specify the mines from which it is obtained. The Commissioners reserve the right to reject any or all the bids if deemed for the interest of the city. By order of the Water Commissioners. GEORGE H. BAILEY, Superintendent and Engineer

A CARD.

THE UNDERSIGNED is Prepared to furnish Estimates and Working Plans for the Erection of Coal and Rosin-Gas Works, of any capacity, upon being furnished with the number of burners intended to be used, and whether Coal or Rosin Works are preferred.

HORATIO EAGLE,
294 Canal-st., N. Y.

Manufacturers' Agent for the sale of Gas Burners, Regulators and Meters, as also of Gas Heating and Cooking Stoves.

BENJAMIN PIKE & SONS, Opticians, Importers and Manufacturers of Mathematical and Philosophical Instruments, No. 518 Broadway, (opposite St. Nicholas Hotel), New York.

Gold, Silver and Steel Spectacles ; Barometers, Thermometers, Surveying Compasses, Theodolites, Levelling Instruments, Opera Glasses, Telescopes and Microscopes ; Air Pumps and Electrical Machines. Instruments and Spectacles repaired. Periscopic Glasses and Pebbles.

DANIEL PIKE. GARDINER PIKE.

TO HOT AIR FURNACE MANUfacturers, register and ventilator manufacturers, or others with capital, and willing to invest in the procuring of a patent for a new invention, and putting the same into practical use. Five models can be seen before agreeing to terms.

Address INVENTOR, P., Herald Office.

WET & DRY GAS METERS.— D. McDonald & Co., No. 51 Lancaster street, Albany, N. Y., Manufacturers of Station-Meters, Wet-Meters, Dry-Meters, Fancy, Experimental and Show-Meters, Gasholders for testing Meters, Pressure Gages, &c. First-class workmen only employed, and the very best materials used. Meters sealed by the State Inspector of New York. We guarantee entire satisfaction in every case.

JOHN RUSSELL & CO.,

PATENT TUBE MAKERS,

THE OLD TUBE WORKS, WEDNESBURY, AND THE ALMA WORKS, WALSAL, STAFFORDSHIRE

69 UPPER THAMES-ST., & 5 CHARLES-ST., SOHO, LONDON;

AND 35 GRANBY-ROW, MANCHESTER, ENGLAND.

The original Manufacturers of WROUGHT-IRON GAS TUBES, and the Inventors of the Lapwelded Tubes for Locomotive and Marine Boilers. All kinds of TUBES and FITTINGS, whether for Gas, Steam, or Water. Galvanized and Composition Tubes. Chandeliers, and every kind of Brass-work for Gas and Steam.

STOCKS, DIES, AND TAPS OF ALL SIZES. CAST IRON PIPE AND GAS-METERS.

ALL GOODS WARRANTED.

CANDLES FROM COAL.—A New Invention, Manufactured by the NEW YORK PARAFFINE CANDLE COMPANY, UNDER MEUCCI'S PATENT.

These Candles being made from one of the products of the distillation of Coal, and having the same chemical constituents as gas, being, in fact,

GAS SOLIDIFIED,

are eminently adapted for giving light. They took the highest premium at the late Fair of the American Institute, held October, 1859, as may be seen from the following extract from the report of the Committee:—

"Our tests with the Photometer showed that the Paraffine Candles above referred to, as compared with the best Sperm, had greater illuminating power, gave a softer and pleasanter light to read by, and burned full ten per cent. longer than the standard Sperm Candle, and we recommend it as deserving the highest premium of the Institute.

"ISAIAH DECK, M. D.,
"Analytical and Consulting Chemist.
"JOSEPH YATES,
"Civil Engineer."

The Candles manufactured by this Company are warranted to stand all climates, will not run or gutter, and require no snuffing, and, unlike some other so-called Paraffine Candles,

DO NOT SMOKE IN BURNING OR BECOME YELLOW WITH AGE, AND ARE WITHOUT ODOR.

CAUTION.—As an Imitation Candle is already offered in the market, purchasers should bear in mind that every box of Candles sold by this Company is stamped with its adopted trade mark, which is a circle, enclosing the words, "NEW YORK PARAFFINE CANDLE CO., MEUCCI'S PATENT, 1859," with our trade mark as above, to imitate which is felony by law.

WM. E. RIDER, 16 Beekman-st., N. Y.,
Agent for the Company.

STANDARD Photometric Candles.—Owing to a number of Applications made to me for information concerning the supply of the "Standard Sperm Candles," used in Photometrics, I have obtained a supply, from which I can furnish those who require them with full directions for use. T. W. PARMELE,
No. 4 Irving Place, New York.

D. C. GREEN'S PARAFFINE 42½ Gall. Lubricating Oil.—228 Pearl street, New York. Benzole, Crude Coal Oils, Naptha, Burning Coal Oils, Paraffine, Paraffine Candles.

COAL OIL.—10,000 Gallons Celebrated Kerosene Coal Oil, 5,000 Gallons Boston Coal Oil, and other brands, at $1.25 per gallon. STANFORD BROTHERS,
Pacific Oil and Camphene Works, cor. of Front and California streets, San Francisco, Cal.

EMPIRE STATE COAL OIL CO.—Manufacturers of Refined, Bleached, and Deodorized Coal Oil, Factory on Smith street, Brooklyn, L. I.; Store, 240 Pearl street, corner Burling Slip, New York.

HENDRICKSON & SHATTUCK, Manufacturers of the Excelsior Lubricating Oil, Philogene and Paraffine Oils; also, Dealers in Sperm, Lard, Whale, Elephant, Tanners', Tallow, Coal, Neatsfoots, Paint and other Oils, Office, No. 22 Cedar street, between William and Pearl streets. D. W. HENDRICKSON,
ALBERT G. SHATTUCK,
New York.

DEPOT AND WAREROOM of the New-York Columbian Oil Company, 58 Courtland street, New York.
G. M. WHEATON, Agent

COPE'S PATENTED COAL OIL Pump.—Reliable and effective. Manufactured by S. CUMMINGS & SON,
No. 162 Front-st., Cincinnati, O.

J. L. McREA, Dealer in Coal Oils and Lamps, Binnacle and Signal Light Oils, 139 Water street, New York.

DANIEL WADSWORTH & CO., Coal Oil Manufacturers, Wholesale Dealers in Oils and Naval Stores, and Commission Merchants.

DANIEL WADSWORTH,
DECIUS WADSWORTH,
207 Pearl street, New York.

ORION COAL OIL WORKS—Office, 116 Maiden Lane, New York.—Illuminating, Crude and Lubricating Oils, Paraffine, Naptha and Paraffine Candles; constantly on hand an assortment of Coal Oil Lamps.

Agent for STODDARD'S ONE AND TWO-HORSE MOWING MACHINE. Office 116 Maiden Lane, New York.
WILLET HICKS, Agent.

FRANKLIN COAL OIL WORKS.—Paraffine, Benzole, Naptha, Distilled Orude Oil, Axle Grease, Pitch.

ROBERT A. CHEESEBROUGH,
Depot 204 Pearl st., cor. Maiden Lane, N. Y.
Works on Red Hook, Brooklyn, manufacturer of Illuminating, Lubricating, Binnacle and Head Light Coal Oils. Also, Agent for the Aladdin Coal Oil Works, Pittsburg.

CARBON OIL CO.—191 Pearl St. near Maiden Lane, N. Y.—Carbon Oil is the product of pure Petroleum, (from the Oil Wells of Pennsylvania,) which makes an illuminating Oil of greater purity than any other Mineral Substance known. Is not explosive, and is for sale, with a general assortment of Lamps, Burners, Chimneys, &c.

DIRECTIONS.—Trim the wick even with the tube, (clipping off the corners slightly). After lighting and putting on the chimney, allow the flame to burn low for a minute, to prevent breaking the chimney. While burning, the wick must always be kept below the top of the cone.

CRUDE COAL OIL For Refiners.—The North American and Lucesco Coal Oil Companies, of Pennsylvania.

J. P. HARLEY, 16 Wall-st.,
WM. C. UHLHORN, 9 South William-st.,
Agents, New York.

TO COAL OIL REFINERS.—Having made arrangements with the Proprietor of the principal wells yielding Petroleum, or Seneca Oil, in the State of Pennsylvania, we are constantly receiving supplies, and are prepared to offer this article on the most favorable terms, and in quantities to suit purchasers.

SCHIEFFELIN BROTHERS & CO.,
170 William street.

P. CONWAY, Manufacturer of Oil Cans, square and round, of every size, Druggists' and Shipping Cans made tight, and delivered to any part of the city, by sending to No. 138 MAIDEN LANE, N. Y.

Rosin Oil and Rosin.—For sale of our own manufacture a superior article of ROSIN OIL, for Gas purposes. Also Refined Oil. For shipment in secure iron-bound barrels, or by any single barrel.

Address MARYLAND GAS COMPANY, No. 6 Bank of Baltimore Building, Baltimore, Md.

P. S. This Company is also prepared to construct their superior Patented GAS WORKS of any capacity, from that required for a private dwelling, hotel, church, college or factory, to such as will supply cities and towns, complete in all their parts for the manufacture of GAS, from either Rosin Oil, Coal, or Rosin.

WHEELER & HOYT.—Distillers of Camphene Alcohol, and Manufacturers of the best quality of burning Fluid; also, Dealers in Oils and Naval Stores of every description. Office, 106 Pearl street, near Maiden Lane, New York.

F. A. WHEELER,
H. S. HOYT.

JAMES A. WEBB, Manufacturer of Alcohol, Camphene, and Burning Fluid, No. 165 Pearl street, New York.

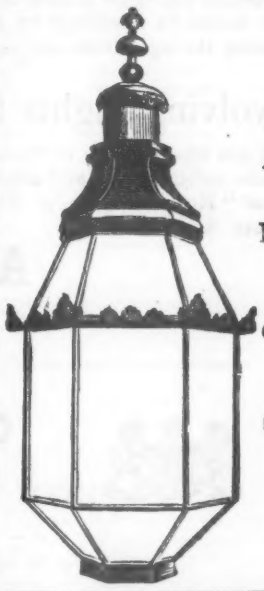
AARON SEELEY, Manufacturer of Burning Fluid, Camphene, and Alcohol, No. 82 Burling Slip, New York.

J. H. BRUNDAGE & CO., Manufacturers of Burning Fluid and Camphene, No. 38 Burling Slip, New York.

STREET GAS-LANTERNS.

Cities and Gas Companies furnished at reasonable rates with Lanterns, Iron Frames, Grazed Complete or Separate. Also, Fancy Lanterns, for Hotels, Restaurants, Theatres, Telegraph Offices, Churches, and other Public Buildings. Having been in the business for many years I fully understand the manufacture of Gas Lanterns, and with the aid of machinery can make the parts cheaper than any other manufacturer. Orders from a distance solicited, and executed promply.

A. C. PARRY,
31 Race Street, Cincinnati, Ohio.



A. & G. BRANDON,

MANUFACTURERS OF

STREET & FANCY

LAMPS!!

OF EVERY PATTERN, FOR

Hotels, Saloons, & Public Buildings,

ON HAND AND MADE TO ORDER.

Cities, Villages and Gas Companies Supplied with Street Lamps, on Favorable Terms.

Office, No. 4 TYRON ROW City Hall Sq.,

AND

Manufactory, No. 102 MULBERRY St.,

(ONE DOOR FROM CANAL-ST.,)

NEW YORK.

PARAGON SELF-GENERATING

GAS-LIGHT BURNER.

Complete in itself, without other machinery. Applied with founts to gas-fixtures in every variety; also, to hand-lamps such as use oil, burning fluid, coal oils, &c., making its own gas in the burner, *with entire safety from burning fluid.* Devoid of smell, smoke, or flicker; combining simplicity, economy and brilliancy of light in any temperature; adapted to and used by churches, factories, dwellings, hotels, steamers, railroad cars omnibuses, private carriages, street lamps, &c., &c.—all at an expense of less than one cent per hour each burner. Call and see this light for the million, or send for circular,

BUTLER, HOSFORD & CO.,
30 Broadway, N. Y

State and county rights for sale. Parties wanting gas in large or small quantities, should apply as above before making other engagements.

SCHWARZ'S PATENT STEATite, or Lava Gas-Burner Tips.—These obtained a Gold Prize Medal in Europe, where they are now extensively used in place of metal tips. In Prof. Liebig's and other Chemists' works, these burners are recommended as *indestructible by acids or alkalies, unchangeable by heat or cold, not liable to rust or corrosion,* and superior in economy to the metal tips. Boston and other cities have adopted them for street lights after a satisfactory trial. They are imported from Germany by the undersigned, sole Agent for America, who can now supply the trade or cities at reduced prices, with any pattern of tips to fit the double cylinder or other kind of burners. For sale also, Large Gas Heating Burners, of same material, for Chemists, &c.

W. W. WARREN,
25 Kilby-st., Boston.

H. P. GENGEMBRE'S PATENT, Non-Freezing and Non-Evaporating Gas-Meter Fluid.

A meter once filled with this fluid, costing only from 10 to 15 cents per gallon, will require no further attendance; will allow any amount of gas to pass through without affecting the level of the Fluid, and will work equally well in winter or summer, however exposed it may be.

I have appointed A. L. BOGART, No. 592 Broadway, New York City, my Agent for the New England States and the State of New York; and A. DOMY, Box 1180, Cincinnati, O., my Agent for the balance of the United States; but no assignment or licenses for using my patent will be valid without being ratified and signed by myself.

H. P. GENGEMBRE,
Box 48, Alleghany City, Pa.

FREEZING OF GAS-PIPES.—Walton's Patent Anti-Freezing Apparatus illustrated by engravings, in the AMERICAN GAS-LIGHT JOURNAL, of Jan., 1860, page 141, is the most simple, durable and efficient of any known process.

According to Professor **Faraday**, the watery vapor contained in illuminating gas amounts to 0·0093 parts where the gas is at a temperature of 40°, or in other words, that there are 1, 7-10 *gills water in every* 1,000 *cubic feet of gas* at that temperature. It is the deposit of this water in the form of frost that closes the exposed pipes.

Walton's plan is, in a few words, to supply this water with a sufficient quantity of alcohol (98–100ths), the vapor of which will enable it to pass through the most exposed pipes, unaffected by frost. Experiments of three years prove that one gill of such alcohol will protect 1,000 feet of gas at any temperature. Private houses, Hotels and Gas-works, can be thus guarantied from frost by the use of Walton's Anti-Freezer, which consists of but two or three small castings, at the most trifling cost. It can be applied at Gas-works without altering any of the pipes; and the expense of labor and the alcohol will not exceed two cents per 1,000 feet of gas.

It can be seen in operation at the rooms of the AMERICAN GAS-LIGHT JOURNAL, where orders will be executed at once.

Read the Following Testimonials:

GAS WORKS, CINCINNATI, O., 24th May, 1858.
MR. JOHN WALTON, Louisville, Ky.:

DEAR SIR,—At an earlier date, I intended to have written you the result of my experience during last winter, in regard to your patented apparatus to prevent the freezing of gas in pipes. I am quite convinced that both in theory and practice your apparatus is correct, and in no case will it fail to prevent the freezing in pipes of our illuminating carburretted hydrogen gas, provided attention is paid to renew the alcohol often enough in proportion to the amount of gas passing through the anti-freezing apparatus.

Yours truly, JOHN JEFFREY.

OFFICE LOUISVILLE, KY., GAS CO., March 30th, 1860.

In the winter of 1856, this Gas Company first applied John Walton's patent method for the prevention of Frost in Service Pipes,—to this date we have used it with perfect success. *This Company have Purchased the Right to this Patent for Louisville, Kentucky.*

The application of a vessel, containing a small quantity of alcohol, placed between the gas main and an open area connected with a building, through which the service pipe was laid, has always prevented the freezing or stoppage of the service pipe, although the temperature may have ranged from the freezing point to several degrees below zero.

As the alcohol absorbs from the gas any vapor of the water that may be passing off with it, after passing the vessel containing alcohol, there remains in the gas nothing that can freeze or close the pipe. *This simple application, we have proved to be an effectual safeguard against the closing of gas pipes with frost.*

ROBERT G. COURTENAY, President.

FRINK'S GAS-LIGHT Reflectors, For Show-Windows, Billiard-Tables, Desks, Churches, Halls, &c.

Frink's Improved Day-Light Reflectors for obviating the use of Gas entirely in the day-time. Frink's Gas-Light Reflecting Shades for Banks, Offices, Parlors, &c. Frink's Concave Gas-Light Reflectors. No. 104 Worth street, third door east of Broadway, New York.

THE THREE GREAT AMERICAN PATENTS.

1.—Cast-Iron Mail-Stations for Public Lamp-Posts.

The Cities of New York, Brooklyn, Williamsburgh, and Philadelphia, are already supplied with these Boxes, and the Cities of New Orleans, Mobile, Cincinnati, Louisville, St. Louis and others will soon follow. The admirable working of this system will cause it to be adopted by the Postmaster-General, throughout the Union. The revenue of the City Mail Delivery of New York has already materially increased since the adoption of the Lamp-Post Letter-Boxes.

2.—Improved Mode of Setting Gas-Meters in the Walls of Buildings.

This Improvement consists of a neat cast-iron box-frame, highly ornamented, set in the Front Walls of Buildings, secured by a Patent Lock and Key, to contain the gas-meter, so that the Inspector can open it from the outside and take the record of the Index.

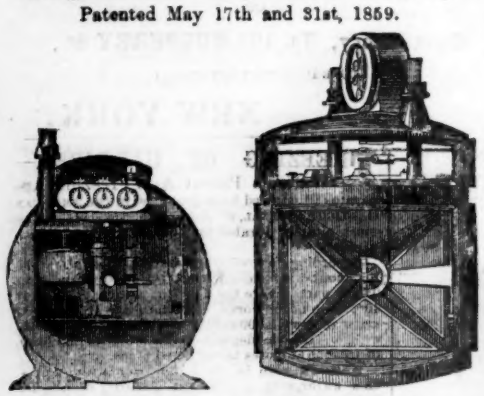
The advantages are two-fold. It prevents access to dwellings by Burglars, under pretence of being gas-inspectors; and, it avoids the trouble and confusion to families and to inspectors, of passing through rooms and cellars, many of which are dark and full of goods and coals or provisions.

3.—New Patent for Revolving Lights for Signalizing Ships at Sea.

By this system, the Lights being attached to the wheel-houses of Steamships, they revolve with the wheels, and an endless variety of signals may be used. The starboard lights being green, and the larboard red, and either or both so arranged as to be instantly reversed, advanced, thrown out of gear or stopped. They can, by the combination of "Rodgers' Code of Signals"—now before Congress for adoption—form a complete vocabulary of language. For either or all of these Improvements, Address

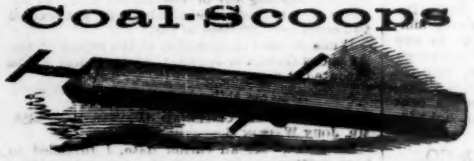
ALBERT POTTS, Patentee,
PHILADELPHIA.

HARRIS & BROTHER'S
Improved Dry Gas-Meter,
Patented May 17th and 31st, 1859.

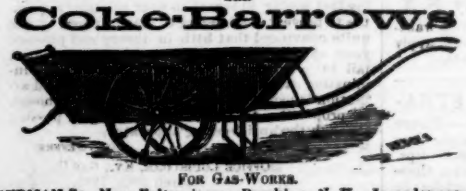


HARRIS & BROTHER,
MANUFACTURERS OF EVERY DESCRIPTION OF
GAS-METERS AND GAS-APPARATUS,
No. 1117 Cherry St., Philadelphia.

McKINNY & KELLY,
MANUFACTURERS OF
Coal-Scoops



AND
Coke-Barrows



FOR GAS-WORKS.
FURMAN St., Near Fulton Ferry, Brooklyn, N. Y. Samples are on Exhibition at the Rooms of THE AMERICAN GAS-LIGHT JOURNAL.

CANNEL and COAL
OF THE BEST DESCRIPTIONS
FOR MAKING GAS AND COKE.

ANALYSES OF CANNEL,
Showing, from the most recent tests, the productive power (in volume) of each kind of material.

No.	GAS. Per ton, 2240 lbs. In Cubic Feet. At 60° temperature.	COKE. Per ton, 2240 lbs. Cwt.	Qrs.	Lbs.	Quality of Coke.	Ammonia Water in Gallons.	Tar in Gallons.	Illuminating power * per burner consuming 5 feet Gas per hour.	Price per ton free on board vessels in Liverpool	Price at $4.80 per £ sterling.
1	11,700	13	2	7	Good.	16	19	22.50	17s.	$4.08
2	11,000	13	1	16	"	18	16½	21.25	15s. 6d.	3.72
3	10,000	11	2	0	Inferior.	25	15½	20.00	14s.	3 36

ANALYSES OF COAL.

No.	GAS. Per ton, 2240 lbs. In Cubic Feet.	COKE. Per ton, 2240 lbs. Cwt.	Qrs.	Lbs.	Quality of Coke.	Ammonia Water in Gallons.	Tar in Gallons.	Illuminating power * per burner consuming 5 feet Gas per hour.	Price per ton free on board vessels in Liverpool.	Price at $4.80 per £ sterling.
1	11,000	13	1	16	Good.	16	11½	14.00	11s. 6d.	$2.76
2	9,690	13	3	0	"	27	10	10.40	9s. 6d.	2.28
3	9,300	13	2	0	"	24	12	9.60	8s. 6d.	2.04

* Equal to Spermacetti Candles, burning 120 grs. per hour.

The above analyses embrace the best Cannel and Coal raised in the Lancashire, &c., districts, and are tabulated, for safety, rather below the average results. They are large, well screened, and free from dirt when delivered on board vessels, and are used for gas purposes at the chief gas works in England and on the Continent.

Orders for less than 50 tons, (i. e., a boat load,) will be charged the cost of carting, viz., 1s. 6d. per ton.

The prices quoted will in all cases be subject to such alterations, more or less, as the case may be, as may arise in the market between the issue of this offer and the time at which the order may come to hand.

TERMS:—Cash, on presentation of the bills of lading at your bankers or agents in Liverpool, or as may be otherwise arranged, less 2½ per cent. discount

Also, HAND PICKED CANNEL and COAL, for house use.

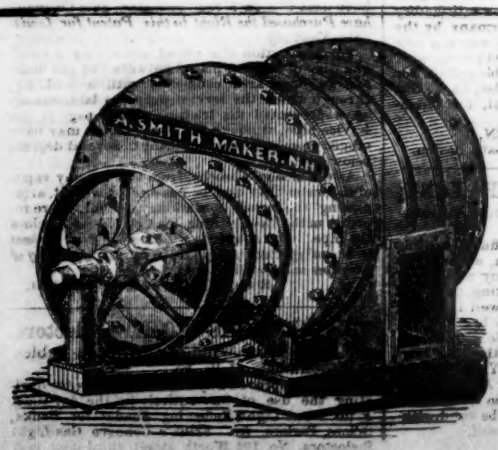
Concessions in prices made for large quantities.

GAS APPARATUS of all descriptions and on the most approved principles. Also, Purifying and other materials supplied.

ANALYSES, PLANS, and ESTIMATES, and other information required, and the highest references, furnished on application.

Contracts for materials and works entered into. No charge made for superintending shipments, preparing bills of lading, or passing entries.

EMANUEL TURNER & CO.,
Export Offices, 34 Castle street, Liverpool, England.



THE ANNEXED CUT REPRESENTS MACKENZIE'S PATENT GAS EXHAUSTER (Force Blast.) It is offered to Gas Companies as a most perfect Machine. They are made of various sizes, capable of exhausting from 5,000 to 150,000 cubic feet per hour.

They require less power, work smoothly, are not so liable to get out of order, and cost much less than the imported ones.

Gas companies intending to use an exhauster, by stating the quantity of gas they may wish to have pass through per hour, will be furnished with a statement of the proper size, and the price of the same, on application to ADDISON SMITH, Manufacturer, New Haven, Conn., or to Messrs. ELLIMAN BROTHERS, New York.

The manufacturer has the liberty to refer to the Albany, N. Y., Gas Light Co., where one has been in constant operation for many months. Another one, capable of exhausting from 50,000 to 70,000 cubic feet per hour, will be in operation in a few weeks, at the St. Louis Mo., Gas-Works.

WILLIAM ROY,
98 Beaver Street.
NEW YORK, IMPORTER OF THE CELEBRATED PERCETON FIRE-CLAY RETORTS the quality of which is superior to any other clay yet discovered. Analysis as under:

Silica	62.5	Magnesia	0.3
Alumina	35.0	Prox. of Manganese	0.2
Prox. of Iron	0.9	Phos. of Iron	0.5
Lime	0.6		

VITRIFIED FIRE-CLAY PIPES, from 2-inch to 36-inch, diameter, in lengths of two or three feet; are indestructible, and not affected by gases or acids.

Thomas Edington & Son's PATENT CAST-IRON PIPES are cast vertically to any weight required. They can also be coated with Dr Smith's Solution, which prevents corrosion; adapted for gas and water. Made in lengths of nine and twelve feet, or turned and bored joints.

WROUGHT IRON TUBES and all materials for gas and water works Fire-Bricks, Fire-Clay, Water Hydrants, Scotch and English Canne Coal, &c. Kennedy's Water Meters for measuring the flow of water—indispensible to all water companies.

BURTIS' PATENT COMPENSATING COUNTERBALANCE FOR GASOMETERS.—This Improvement consists in making the attachment to the Gas-Holder by counterweights in such a manner as to effectually prevent it from getting out of level so as to bind, and also to prevent any escape of Gas at Cup or Hydraulic seal, where the Holder is on the Telescopic plan. Holders that work out of level, are thus evenly balanced, and prevented from binding or lodging against Tank-wall and falling down, thereby being rendered unfit for service. Where Holders or sections of Holders cannot be used on account of the above difficulties, this arrangement will remove them, and place the Holder in good working order; moreover, with this attachment, deep tanks are not necessary

BURTIS' COUNTERBALANCE has been in use for three years at the Gas-Works, Chicago, Ill. Its resistance to high winds and snow-drifts, is alone sufficient to recommend its general adoption. For Engravings, see AMERICAN GAS-LIGHT JOURNAL for June, 1860, page 221. Address

P. T. BURTIS,
Engineer Gas-Works, Chicago, Ill.

BEAUMONT'S Metallic Thermometers, Barometers and Steam Gages, for Gas-Light and Water Companies. These instruments are entirely Accurate, Portable, and Reliable. Manufactured and for Sale by

VICTOR BEAUMONT, No. 175 Centre-st., N. Y.

For Engravings, see AMERICAN GAS-LIGHT JOURNAL, for May, 1860, page 221.

C. R. WOODWORTH,
Manufacturer of
PORTABLE GAS WORKS,
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